PUBLIC HEALTH REPORTS

VOL. 32 MAY 11, 1917 No. 19

EPIDEMIC CEREBROSPINAL MENINGITIS.

The current prevalence of epidemic cerebrospinal meningitis in so far as data are available will be found on pages 703–704.

VACCINE VIRUS.

SHOULD ALWAYS BE KEPT ON ICE.

Vaccine virus rapidly loses its potency unless kept cool. In many drug stores vaccine is kept in a drawer back of the counter instead of in the ice box. Under these conditions the vaccine is likely to be worthless and not to produce successful vaccination. In buying vaccine one should ascertain that it has been properly kept.

It is a matter of common knowledge that biologic products should be kept in a cool place. The United States Pharmacopœia, ninth decennial revision, specifies temperatures between 4.5° and 15° C. for diphtheria and tetanus antitoxin and vaccine virus—the three official products of this class. What is not generally appreciated is the difference between these products in this respect. The change in the antitoxins, serums, and such products as typhoid vaccine is a gradual chemical deterioration, since these contain no living matter; in the case of the antitoxins it can be demonstrated that at reasonable temperatures and within reasonable times the products are not rendered valueless, nor harmful—simply a somewhat larger amount must be used to produce a given effect.

With vaccine virus we have an altogether different situation. The virus is a living thing, suspended in a medium without food for multiplication, and like most minute living things which do not enter the spore state, death rapidly takes place unless the life processes are retarded by refrigeration. No definite and certain limits can be placed on the duration of the life of the vaccine virus at different temperatures, for we know neither the number of living microorganisms of vaccinia originally present nor the minimum number necessary to produce the characteristic vaccination; both are undoubtedly variable. As the virus leaves the manufacturer's hands it is practically always potent. It is a fact, however, that as commonly cared for in drug stores the vaccine virus of commerce deteriorates rapidly.

Virus of various manufacturers purchased at drug stores has been found, though within the stamped expiration date, to give less than

50 per cent of "takes"; but when obtained direct from the manufacturer, "takes" were nearly 100 per cent. Vaccine virus at pharmacies is often kept in the cellar or in the soda fountain cooler, and the temperature of these places, both winter and summer, has been found to be in the neighborhood of 15° C. (59° F.) or higher. This is by no means satisfactory. Ice-box temperature is not freezing temperature, but usually several degrees above freezing. Vaccine virus should be kept in a metal container in constant contact with the ice itself. If it can be kept at or below the freezing point, so much the better. There is no danger of keeping it too cold.

SMALLPOX.

The mild type of smallpox has been widely prevalent in the United States since 1898. The tables which follow show the number of cases reported in cities during the five weeks ended April 21, and the counties in which 10 or more cases were reported during the month of March. The disease has appeared to be universally of the mild type except in Austin, Tex., where the virulent type is present.

For additional information concerning the current prevalence of smallpox see pages 707–709.

Cases of smallpox reported in cities during 5 weeks ended Apr. 21, 1917.

Place.	Number of cases reported.	Place.	Number of cases reported.
Akron, Ohio	[1] 2	Madison, Wis	19
Ann Arbor, Mich	3	Marinette, Wis	4
Austin, Tex	76	Milwaukee, Wis	2
Baltimore, Md	8	Minneapolis, Minn	154
Birmingham, Ala	2	Muscatine, Iowa	4
Buffalo, N. Y	1	Nashville, Tenn	2
Butte, Mont	19	New Castle, Pa	3
Cairo, Ill	20	New Orleans, La	46
Chicago, Ill	14	New York, N. Y	2
Cincinnati, Ohio	5	Oakland, Cal	9
Cleveland, Ohio	50	Ogden, Utah	1
Covington, Ky	14	Oklahoma City, Okla	42
Danville, Ill	32	Omaha, Nebr	29
Davenport, Iowa	9	Pittsburgh, Pa	3
Denver, Colo	1	Pontiac, Mich	16
Detroit, Mich	16	Portland, Oreg	5
Dubuque, Iowa	3	Quincy, Ill	3
Duluth, Minn	26	Roanoke, Va	2
East Chicago, Ind	12	Rockford, Ill	4
El Paso, Tex	5	Rocky Mount, N. C	2
Evansville, Ind	20	St. Joseph, Mo	85
Flint, Mich	16	St. Louis, Mo	57
Fort Wayne, Ind	6	St. Paul, Minn	9
Fort Worth, Tex	4	Salt Lake City, Utah	22
Galveston, Tex	4	San Francisco, Cal	32
Grand Rapids, Mich	7	Seattle, Wash	1
Hartford, Conn	1	Sioux City, Iowa	60
Indianapolis, Ind	32	Springfield, Ill	9
Jackson, Mich	1	Steelton, Pa	2
Kansas City, Mo	19	Toledo, Ohio	2
Kokomo, Ind	1	Topeka, Kans	8
La Crosse, Wis	6	Washington, D. C	1
Lima, Ohio	42	Wichita, Kans	12
Little Rock, Ark	29	Worcester, Mass	2
Los Angeles, Cal	2	Zanesville, Ohio	6

[1] Reports for 3 weeks not received.

Counties in which 10 or more cases of smallpox were reported during March, 1917, showing number of cases reported.

State.	Number of cases reported.	State.	Number of cases reported.
Arkansas:		Michigan:	
Garland County	14	Alpena County	23
Greene County	15	Genesee County	12
Lawrence County	10	Ingham County	13
Mississippi County	53	Oakland County	29
Polk County	12	Wayne County	16
White County	12	Minnesota:	
California:		Hennepin County	156
San Bernardino County	15	Olmsted County	24
San Francisco County	31	Polk County	10
Kansas:		Ramsey County	16
Barton County	18	St. Louis County	26
Coffey County	18	Wright County	10
Crawford County	37	Oregon:	
Doniphan County	13	Clatsop County	13
Logan County	14	South Carolina:	
Marion County	40	Edgefield County	12
Sedgwick County	17	Wisconsin:	
Shawnee County	16	Calumet County	25
Sumner County	17	Chippewa County	12
Wabaunsee County	19	Dane County	14
Louisiana:		Marinette County	10
Assumption Parish	11		
Orleans Parish	87		

CONFERENCE OF HEALTH AUTHORITIES.

UNITED STATES PUBLIC HEALTH SERVICE IN ANNUAL CONFERENCE WITH STATE AND TERRITORIAL HEALTH AUTHORITIES, WASHINGTON, APRIL 30 AND MAY 1, 1917.

The fifteenth annual conference of the State and Territorial health authorities with the Public Health Service of the United States was held April 30 and May 1, 1917, in the city of Washington. This conference is held annually pursuant to an act of the Congress approved July 1, 1902.

The following were among the matters brought before the conference for its consideration:

The need and advisability of correlating the Federal, State, and local health authorities and agencies to effect a maximum of cooperative efficiency in times of national emergency.

Reciprocal notification by State and Territorial authorities of disease carriers traveling or about to travel from one State or Territory to another.

Minimum standard morbidity tables for use in annual reports of State and Territorial health authorities showing the prevalence and geographic distribution of cases of the notifiable diseases.

What constitutes an epidemic or unusual prevalence of a disease.

The typhus fever situation as it affects the United States and the best means of handling it.

Are health authorities using all available information and known means to reduce the morbidity from pneumonia, syphilis, and tuberculosis.

The sanitation of public conveyances.

Interstate quarantine regulations.

Intrastate quarantine regulations.

Health insurance versus sickness insurance.

Standard methods of public health accounting.

The status of full-time local health officers in the United States.

Rural public health administration and sanitation.

The development of an area of known disease prevalence through the establishment of a morbidity registration area of the notifiable diseases.

The need for better, more uniform, and comparable morbidity statistics of general hospitals, special hospitals, and sanatoria, and the advisability of the establishment of a registration area for morbidity and medical statistics of these institutions.

The need for uniform and comparable morbidity and medical statistics of penal institutions, and the advisability of the establishment of a registration area for the morbidity statistics of these institutions.

The need for uniform and comparable morbidity statistics of those engaged in certain industries, and the advisability of the establishment of a registration area for such statistics.

The collection and publication of public health and sanitary information as it relates to the several States and Territories, such as public health laws and regulations, directories of State and Territorial health authorities, appropriations made for public health purposes, and public health methods and practices.

Resolutions Adopted.

The following are among the resolutions formally adopted by the conference:

PARTICIPATION OF STATES IN CONFERENCE.

Resolved, That the Secretary of the Treasury be requested, through the Surgeon General of the United States Public Health Service, to call to the attention of the governors and the health authorities of the several States and Territories the important public health aspects of the annual conferences of the State and Territorial health authorities with the United States Public Health Service and to urge that due provision be made for the regular attendance of the proper health officials and for their attendance also on such committee meetings as may be necessary for the work of such conferences.

STANDARD MORBIDITY TABLES.

Resolved, That the conference adopts as minimum standard morbidity tables for publication in annual reports of State and Territorial health authorities tables giving the distribution of cases of the notifiable diseases, as follows:

1. Chronologically by months.
2. By sex.
3. By 5-year age groups up to 25 years and by 10-year age groups after 25 years.
4. By termination (recovery or death).
5. Geographically by counties and municipalities.

RECIPROCAL NOTIFICATION OF DISEASE CARRIERS.

Whereas immediate knowledge of (1) cases of communicable diseases (plague, cholera, typhoid fever, pulmonary tuberculosis, yellow fever, smallpox, leprosy, typhus fever, scarlet fever, diphtheria, measles, whooping cough, poliomyelitis (infantile paralysis), Rocky Mountain spotted or tick fever, epidemic cerebrospinal meningitis, and dysentery, and such other diseases as the Surgeon General of the United States Public Health Service may designate from time to time) recognized in one State, but obviously infected outside that State, and of (2) persons leaving one State for another while in an infectious condition, and of (3) persons leaving a State after exposure to a source or medium of infection of an acute infectious disease,

would be of great value to the health authorities of the States and Territories which may be concerned and to the United States Public Health Service; be it

Resolved, That during the present war immediate reciprocal notification in regard to such cases and carriers and exposed persons be made by State and Territorial health authorities on forms to be provided by the United States Public Health Service.

HEALTH INSURANCE VERSUS SICKNESS INSURANCE.

Resolved, That in the judgment of this conference the use of the phrase "health insurance" to describe a system of sickness relief that makes no specific, positive, and definite provision for the conservation of health is liable to endanger the efficiency of existing health agencies and retard their further development.

Resolved, That in any scheme for health insurance all activities looking toward the active conservation and promotion of health should be entrusted to the regularly established health conservation agencies, which should be reorganized or reinforced for that purpose if necessary.

DRINKING FOUNTAINS.

INVESTIGATION OF FOUNTAINS AT THE UNIVERSITY OF MINNESOTA.

By H. A. Whittaker, Director, Division of Sanitation, Minnesota State Board of Health.

This investigation was undertaken to determine the sanitary condition of the drinking fountains in use at the University of Minnesota and, if they were found to be unsatisfactory, to offer recommendations for correcting defects. The work consisted of a study of the mechanical features of each fountain, bacteriological examinations of the parts of the fountain exposed to the lips of the consumer, and bacteriological examinations of the water supplied to and discharged from the fountain.

The method of conducting this investigation was briefly as follows: Samples of water were collected from taps in the various buildings to represent the water supplying the fountains, and from the jet on each fountain to represent the water discharged from the fountain. A swab was rubbed over all parts of the fountain that might easily come in contact with the lips of the consumer, in order to determine the presence or absence of streptococci. The water samples were examined for the total number of bacteria per cubic centimeter, for *B. coli* in 1 and 100 cubic centimeter amounts, and for streptococci in 100 cubic centimeter amounts. The bacterial counts were made on agar after forty-eight hours' incubation at 37° C. The determinations for *B. coli* were made in accordance with the routine methods [1] used by this division. The examinations for streptococci in 100 cubic centimeter samples of water were made by enriching the samples with quadruple strength dextrose broth and examining

[1] Public Health Reports, vol. 29, No. 20, May 15, 1914, p. 1228-1229.

microscopically after forty-eight hours' incubation at 37° C. The examinations for streptococci on the swabs were made by inoculating directly into dextrose broth and examining microscopically after forty-eight hours' incubation at 37° C. The presence of streptococci was used to indicate possible contamination from the mouth of the consumer, as these organisms are commonly found in abundance in the mouths of human beings. It must be admitted that streptococci might be contributed from other outside sources, but this is not probable under existing conditions. The presence of *B. coli* was used as an indication of contamination of fecal origin.

Following the collection of the specimens for bacteriological examination, a study of the mechanical features of each type of fountain was made by removing various parts so that the details of construction could be observed.

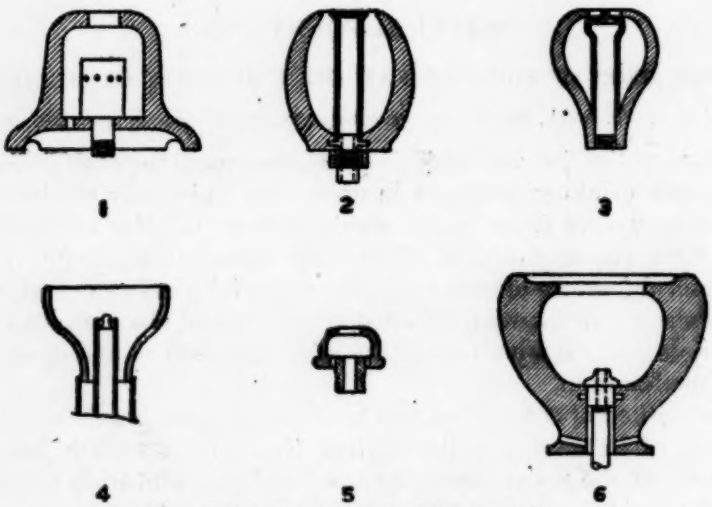

FIG. 1.—Nozzles on drinking fountains examined.

The water supply of the main campus of the University of Minnesota is obtained from the public supply of the city of Minneapolis. This water is taken from the Mississippi River and is subjected to sedimentation, coagulation, filtration, and liquid chlorine treatment before distribution for consumption. The water supply of the department of agriculture is obtained from two drilled wells located on university property.

The results of the bacteriological examinations of the water from both sources are shown in Table 1. The water supply of the department of agriculture is represented by Nos. 1 and 2, and that of the main campus by Nos. 3 to 18, inclusive. The results of the examinations of the drinking fountains are recorded in Table 2, while the

sketches of the various types investigated are shown in figures 1 and 2. The summarized results of the entire investigation are included in Table 3.

A résumé of the results shows that 77 drinking fountains, which represented 15 different types, were examined. Sixty-five per cent of these fountains were of the continuous-flow type and 35 per cent of the intermittent type operated by the consumer. The nozzles on all of these fountains discharged the water vertically. The height

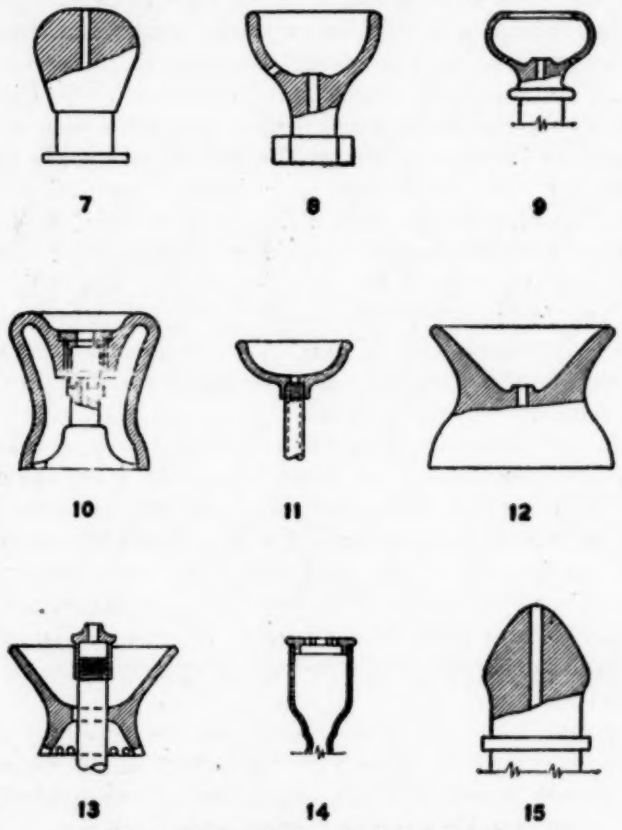

FIG. 2.—Nozzles on drinking fountains examined.

of the water jet above parts of the fountain that could be touched by the lips of the consumer was less than 1 inch in 40 per cent of the fountains. On examination of the various types shown in figures 1 and 2, it is seen that all are subject to contamination by the consumer, either directly by the lips or by water falling back from the lips onto the jet or the surrounding parts. Certain of these types have closed receptacles around the point of discharge, which retain a part of the water discharged from the outlet. Coloring matter

added to these receptacles was not entirely removed for long periods of time.

The bacteriological examinations of the water supplied to 18 university buildings show consistently low bacterial counts, and *B. coli* and streptococci were not found present in 100 cubic centimeter amounts. The results on water discharged from the fountains show higher bacterial counts in a few instances, and the presence of streptococci in 11 per cent of the fountains examined, but *B. coli* was not found present in 100 cubic centimeter amounts in any case. The examinations of the swabs show the presence of streptococci on the parts exposed to the lips of the consumer in 80 per cent of the fountains. To summarize these results, they show: (*a*) That a large proportion of the fountains were infected with streptococci, which it is reasonable to assume came from the mouths of the consumers, as these organisms were not found in the water supplying these fountains; (*b*) that streptococci were actually present in the water discharged from the fountains and could be transmitted to the mouth of a consumer, even though the lips were not touched to the infected parts. These facts suggest the possibility of the fountains being a factor in the transmission of certain communicable diseases, and that certain changes should be made in their construction to eliminate this danger.

The principal defect in construction was the vertical discharge of water from the fountain. This made it necessary for the consumer to place the mouth directly over the point of discharge, and the majority of persons drank with the lips touching the discharge nozzle of the fountain. This was especially true where the water jet was low, but even when it was high enough to avoid this practice the average consumer placed the mouth over the jet and then lowered the head until the lips touched the discharge nozzle or adjacent parts of the fountain.

Experiments were conducted with various types of fountains which were designed with the view of correcting the defects noted in those already in use. It was found that the most practical construction to obviate the principal defect mentioned was to discharge the water from the fountain at such an angle that the consumer could drink without approaching the point of discharge, thus eliminating the possibility of water falling back from the mouth onto parts of the fountain at or near the point of discharge. This principle was suggested previously by Pettibone, Bogart, and Clark [1] following an investigation of drinking fountains at the University of Wisconsin.

[1] Journal of Bacteriology, Vol. 1, No. 5, Sept. 1916, p. 471.

It was found necessary in a practical design to entirely protect the point of discharge and to guard the nozzle against the approach of the consumer. The nozzle shown in figure 3 fulfills these requirements, and can be substituted for the nozzle used on practically any of the common types of drinking fountains. This type of nozzle protects the point of discharge by inclosing the small discharge tube in a larger tube which is cut at an angle with its upper surface extending beyond the outer extremity of the inner tube. The wire muzzle prevents the consumer from approaching the point of discharge. This nozzle can be used on the constant or intermittent flow type. In cases where the water pressure varies to a large degree, pressure regulators should be installed. Doubtless there are many other mechanical possibilities of accomplishing the same result, but the

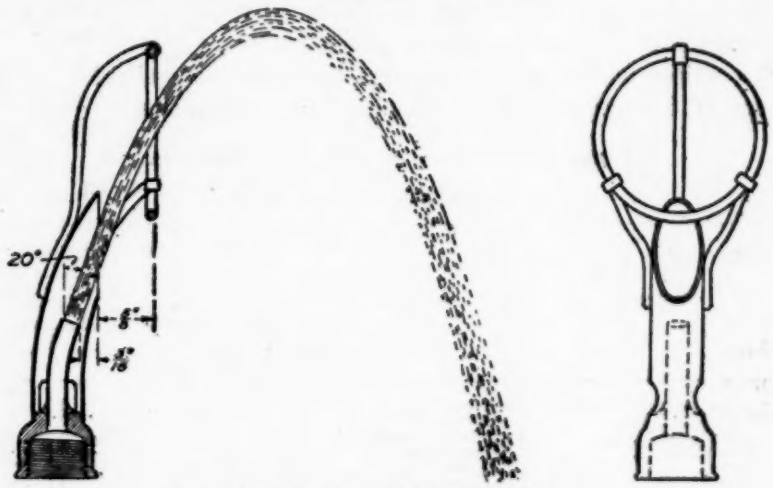

FIG. 3.—A protected type of drinking fountain nozzle.

one shown is simple and inexpensive, and it can be attached to practically any fountain.

Figure 4 shows a consumer drinking from an unprotected type of fountain with the mouth directly over the jet. A cross section of the nozzle of this fountain is shown in figure 2, No. 7. Figure 5 shows a consumer drinking from the same fountain with the improved nozzle shown in figure 3. This improved nozzle was installed on a fountain located in the main corridor of one of the university buildings. It was kept in operation for several weeks, during which time a large number of persons used the fountain daily. The regular tests were applied to this fountain at different times during this period, with the results shown in Table 4. These results indicate that this type of fountain nozzle will protect the consumer.

CONCLUSION.

This investigation included the 77 drinking fountains in use at the University of Minnesota. These fountains represented 15 different types, all of which were found to be improperly constructed to prevent them from contamination by the consumer. The bacteriological examinations conducted on these fountains showed that 80 per cent were infected with streptococci, and that the water from 11 per cent of these fountains contained organisms of this type when they were not found present in the water supplied to the fountains. These results indicate that drinking fountains may be a factor in the transmission of communicable diseases, a condition which should be remedied.

Experiments were conducted with various fountain nozzles to supplant those in use, and a type was designed which is economical to construct and safe from a sanitary point of view.

The writer wishes to acknowledge the valuable assistance of Mr. George W. Putnam in connection with this investigation.

TABLE 1.—*Results on water supplies at buildings.*

[+=positive result; 0=negative result.]

No.	Building.	Location.	Bacteriological examination.			
			Streptococci, 100 c. c.	Bacteria, 1 c. c.	B. coli.	
					1 c. c.	100 c. c.
1	Agricultural, engineering	Second-floor toilet	0	2	0	0
2	Agricultural, main	First-floor toilet	0	2	0	0
3	Elliott Hospital	Third-floor corridor	0	3	0	0
4	Millard Hall	Basement corridor	0	1	0	0
5	Anatomy	First-floor toilet	0	1	0	0
6	Biology	Basement toilet	0	1	0	0
7	Main engineering	do	0	2	0	0
8	Experimental engineering	do	0	1	0	0
9	Mines	do	0	2	0	0
10	Chemistry	Second-floor toilet	0	2	0	0
11	Men's Union	Basement toilet	0	4	0	0
12	Dentistry	Second-floor corridor	0	2	0	0
13	Pharmacy	Basement toilet	0	2	0	0
14	Mechanic arts	do	0	2	0	0
15	Pathology and public health	First-floor laboratory	0	0	0	0
16	Electrical engineering	Basement toilet	0	3	0	0
17	Folwell Hall	do	0	1	0	0
18	Education	do	0	2	0	0

FIG. 4.—CONSUMER DRINKING FROM ONE OF THE UNPROTECTED TYPES OF FOUNTAIN.

FIG. 5.—CONSUMER DRINKING FROM PROTECTED TYPE OF FOUNTAIN.

TABLE 2.—*Results on drinking fountains.*

[N=north end; S=south end; E=east end; W=west end; c=constant-flow type; i=intermittent-flow type; ci=intermittent type used as constant-flow type. + =positive result; 0=negative result.]

No.	Building.	Location.	Type.	Height of water jet in inches.	Bacteriological examination.				
					Swab.		Water.		
					Streptococci.	Streptococci in 100 c. c.	Bacteria, 1 c. c.	B. coli.	
								1 c.c.	100 c. c.
1	Agricultural engineering.	Corridor, second floor N	1	0.1 c	0	0	2	0	0
2	.....do.....	Corridor, first floor S...	1	.4 c	+	0	100	0	0
3	.....do.....	Corridor, third floor...	1	.3 c	+	+	6	0	0
4	.....do.....	Blacksmith shop.....	2	.4 c	+	+	2	0	0
5	.....do.....	South shop.....	2	1.0 c	+	+	2	0	0
6	Agricultural, Main .	Corridor, first floor....	3	3.0 i	+	+	4	0	0
7	.....do.....	Corridor, second floor .	3	.8 i	+	+	4	0	0
8	Agricultural, power plant.	Tool room.....	4	.5 ic	+	+	3	0	0
9	Elliott Hospital....	Corridor, third floor...	5	3.0 i	+	0	4	0	0
10	.....do.....	Corridor, fourth floor..	5	1.5 i	+	0	5	0	0
11	.....do.....	Corridor, fifth floor....	5	.6 i	+	0	4	0	0
12	.....do.....	Corridor, second floor .	5	4.0 i	+	0	8	0	0
13	.....do.....	Corridor, first floor....	5	6.0 i	0	0	10	0	0
14	Millard Hall.....	Corridor, third floor N..	6	.6 c	0	0	5	0	0
15	.....do.....	Corridor, third floor S..	6	.5 c	+	0	5	0	0
16	.....do.....	Corridor, second floor N	6	1.4 c	+	0	25	0	0
17	.....do.....	Corridor, second floor S	6	.3 c	+	+	2	0	0
18	.....do.....	Corridor, basement N .	6	1.4 c	+	0	1	0	0
19	.....do.....	Corridor, basement S..	6	1.3 c	+	0	1	0	0
20	.....do.....	Corridor, first floor S..	6	.4 c	+	0	2	0	0
21	.....do.....	Corridor, first floor N .	6	1.5 c	+	0	2	0	0
22	Anatomy.....	Corridor, third floor...	6	.8 ic	+	0	5	0	0
23	.....do.....	Corridor, second floor..	6	.8 i	0	0	5	0	0
24	.....do.....	Corridor, first floor....	6	1.3 i	+	+	3	0	0
25	.....do.....	Corridor, basement....	6	1.0 ic	+	0	3	0	0
26	Biology.....	.....do.....	7	.4 i	0	0	2	0	0
27	.....do.....	Corridor, first floor....	7	1.1 ic	+	0	2	0	0
28	.....do.....	Corridor, second floor..	7	2.0 i	0	0	3	0	0
29	.....do.....	Corridor. third floor...	7	1.6 ic	+	0	2	0	0
30	Main engineering...	Corridor, basement S..	8	1.0 i	+	0	5	0	0
31	.....do.....	Corridor, basement N.	8	1.0 i	+	0	7	0	0
32	.....do.....	Corridor, first floor N..	8	1.0 i	+	0	9	0	0
33	.....do.....	Corridor, first floor S..	8	.9 i	+	0	2	0	0
34	.....do.....	Corridor, second floor S.	8	1.0 i	0	0	4	0	0
35	.....do.....	Corridor, second floor N	8	1.3 i	+	0	4	0	0
36	.....do.....	Corridor, third floor N .	8	1.0 i	+	0	3	0	0
37	Experimental engineering.	Corridor, first floor....	8	.5 ic	+	0	2	0	0
38	Chemistry.....	Corridor, third floor N.	9	1.3 i	+	0	2	0	0
39	.....do.....	Corridor, second floor S	9	.4 i	+	0	45	0	0
40	.....do.....	Corridor, first floor S..	9	2.5 ic	+	0	8	0	0
41	.....do.....	Corridor, first floor N..	9	.6 ic	+	0	6	0	0
42	.....do.....	Corridor, basement N.	9	1.5 i	0	0	4	0	0
43	.....do.....	Corridor, basement S..	9	1.3 i	+	0	3	0	0
44	Mines.....	Corridor, third floor...	7	1.8 ic	+	0	2	0	0
45	.....do.....	Corridor, second floor .	7	1.8 ic	0	0	1	0	0
46	.....do.....	Corridor, first floor....	7	.8 ic	+	0	2	0	0
47	.....do.....	Corridor, basement....	7	2.5 i	+	0	2	0	0
48	Men's Union.....	Corridor, first floor....	10	.1 ic	+	+	2	0	0
49	Dentistry.....	Corridor, second floor .	12	1.8 c	+	0	2	0	0
50	.....do.....	Corridor, first floor....	12	1.0 c	+	+	1	0	0
51	.....do.....	Corridor, basement....	12	1.3 c	+	+	1	0	0
52	Pharmacy.....	Corridor, first floor....	8	1.8 c	0	0	3	0	0
53	Mechanic arts.....	Corridor, basement....	11	1.0 c	0	0	2	0	0
54	Library.....	Corridor, first floor....	11	.5 c	0	0	3	0	0
55	Women's gymnasium.	.....do.....	7	.6 i	+	0	33	0	0
56	Pathology and public health.	Corridor, second floor N	14	12.0 i	+	0	2	0	0
57	.....do.....	Corridor, second floor S	14	1.3 i	+	0	4	0	0
58	.....do.....	Corridor, first floor....	13	.5 c	+	0	2	0	0
59	Mechanical engineering.	.....do.....	11	.6 c	+	0	6	0	0

TABLE 2.—*Results on drinking fountains*—Continued.

No.	Building.	Location.	Type.	Height of water jet in inches.	Bacteriological examination.				
					Swab.		Water.		
					Streptococci.	Streptococci in 100 c. c.	Bacteria, 1 c. c.	B. coli.	
								1 c.c.	100 c. c.
60	Electrical engineering.	Corridor, first floor	11	.5 c	+	0	2	0	0
61	Pillsbury Hall	Corridor, basement	11	1.0 c	+	0	5	0	0
62	Armory	Corridor, first floor S	11	.8 c	+	0	2	0	0
63	do	Corridor, first floor N	11	.1 c	+	0	2	0	0
64	Folwell Hall	Corridor, basement	13	2.0 c	0	0	5	0	0
65	do	Corridor, first floor W	13	1.8 c	+	0	3	0	0
66	do	Corridor, first floor E	13	1.5 c	+	0	1	0	0
67	do	Corridor, second floor W	13	3.0 c	+	0	8	0	0
68	do	Corridor, third floor	13	2.0 c	+	0	5	0	0
69	Physics building	Corridor, basement	11	.5 c	+	0	5	0	0
70	Music	do	11	.5 c	+	0	5	0	0
71	Law	Corridor, first floor	11	.8 c	+	0	4	0	0
72	Education	Corridor, basement W	15	1.5 c	0	0	5	0	0
73	do	Corridor, basement E	15	1.0 c	+	0	3	0	0
74	do	Corridor, first floor E	15	1.5 c	+	0	4	0	0
75	do	Corridor, first floor W	15	1.0 c	0	0	4	0	0
76	do	Corridor, second floor W	15	.5 c	+	0	3	0	0
77	do	Corridor, second floor E	15	1.5 c	+	0	4	0	0

TABLE 3.—*Summarized results of investigation.*

Number examined		77
Number of types		15
Height of water jet:		
Continuous—		
Minimum	inches	0.1
Maximum	do	3.0
Intermittent—		
Minimum	do	0.4
Maximum	do	12.0
Bacteriological examination:		
Swab from fountains—Streptococci positive	per cent	80
Water from fountains—		
Streptococci in 100 c. c. positive	do	11
Bacteria per c. c. average		6
B. coli positive—		
1 c. c.		0
100 c. c.		0
Water from buildings—		
Streptococci in 100 c. c. positive		0
Bacteria per c. c. average		2
B. coli positive—		
1 c. c.		0
100 c. c.		0

TABLE 4.—*Results on drinking fountain with improved nozzle.*

Number of examinations	3
Bacteriological examination:	
Swab—Streptococci positive	0
Water from fountains—	
Streptococci in 100 c. c. positive	0
Bacteria per c. c. average	3
B. coli—	
1 c. c.	0
100 c. c.	0
Water from building—	
Streptococci in 100 c. c. positive	0
Bacteria per c. c. average	0
B. coli—	
1 c. c.	0
100 c. c.	0

MECHANICAL FANS.

THEIR USE TO INCREASE THE EFFICIENCY OF FUMIGATING GASES.

By S. B. GRUBBS, Surgeon, United States Public Health Service.

While making experiments at the Boston Quarantine Station to test the penetrating powers of fumigating gases, it was observed that a rat in a certain box (box 1) that had shown no symptoms after one hour exposure to cyanide gas in the room was quickly overcome when a small electric fan was started in order to drive the gas through a window. This incident was the more remarkable as the window was on the opposite side of the room and the fan was on the window sill, driving the gas outside. Although the strength of the gas was being rapidly decreased, the agitation of the air by the fan apparently caused the gas to penetrate rapidly the holes in the box holding the rat.

Experiments were therefore made to investigate the penetration of cyanide gas when mechanically agitated as compared with the same gas under natural conditions. Of these experiments one series may be cited. They were made in a room of 500 cubic feet capacity, practically air-tight, and with a small electric fan (8-inch, delivering 390 cubic feet per minute) in one corner near the ceiling and directed toward the center of the room. The boxes used were intended to imitate the hiding places of rats on shipboard. They may be described as follows:

Box 1.—Air-tight wooden box, 8 by 8 inches by 2 feet, with two partitions 1 inch apart near one end. This end has four 1-inch holes. The middle partition has two 1-inch and two half-inch holes. The

inner partition has two 1-inch, two half-inch, and two three-eighths inch holes.

Box 2.—Same as box 1, with one less 1-inch hole in end and inner partition.

Box 3.—Air-tight wooden box, 4 by 4 inches by 4 feet, with one 2-inch hole near one end. A wire partition confines the rat to closed end.

Box 4.—Same as box 3, except hole is 1 inch instead of 2 inches.

Box 5.—Packing box, 12 by 18 inches by 4 feet. Box is tight except top, which has cracks.

Box 6.—Air-tight wooden box, 6 feet long, 2 inches square at one end and 10 inches square at the other. A wire partition confines rat to small end. There is one 2-inch hole near large end.

All except box 5 have a glass side and were placed near a window, where the effects on the rats could be noted.

One full-grown rat in each box.	Box 1.		Box 2.		Box 3.		Box 4.		Box 5. Final result.	Box 6.	
	Overcome in—	Final result.	Overcome in—	Final result.	Overcome in—	Final result.	Overcome in—	Final result.		Overcome in—	Final result.
4 ounces NaCN per 1,000 cubic feet. 1 hour exposure. Electric fan not running.	49 minutes.	Recovered..	.....	.....	52 minutes.	Recovered..	.....	.....	Box one-fourth full of excelsior. Dead.	.....	
Same.....	41 minutes.	.....do.....	Not affected.	None.....	27 minutes.	Died	.....	.....	Box three-fourths full of excelsior. Not affected.	.....	
4 ounces NaCN per 1,000 cubic feet. 1 hour exposure. Electric fan running.	25 minutes.	Died	28 minutes.	Recovered..	32 minutes.	Recovered..	20 minutes.	Recovered..	Box three-fourths full of excelsior. Dead.	10 minutes.....	Died.
Same.....	24 minutes.	Recovered..	37 minutes.	.....do.....	29 minutes.	Died	45 minutes.	.....do.....	.....do.....	25 minutes.....	Do.
4 ounces NaCN per 1,000 cubic feet. 1½ hours exposure. Electric fan not running.	.....	.....	58 minutes.	.....do.....	.....	.....	1 hour and 5 minutes.	.....do.....	Box three-fourths full of excelsior. Not affected.	Not affected.....	None.
6 ounces NaCN per 1,000 cubic feet. 1 hour exposure. Electric fan not running.	.....	.....	39 minutes.	.....do.....	.....	.....	Not affected.	None.....	.....do.....	.....do.....	Do.

As will be seen, better results were obtained with the fan in one hour than in one and a half hours without the fan, everything else being equal; or, the time being the same, 4 ounces of sodium cyanide with the fan did as well as 6 ounces without it.

Unfortunately no practical method of applying this method to large spaces is known. Attempts have been made to circulate the air in the holds of vessels, using a gasoline-driven air propeller—the aerothrust—and two types of electric fans bringing the current from the quarantine steamer. The air current of the larger electric fan (diameter 15 inches, delivering 1,500 cubic feet per minute) in the average hold of a vessel is relatively about one-thirtieth as strong as that of the 8-inch fan in the small room in which the experiments were conducted. It has been tried repeatedly with some apparent increase of efficiency, but not enough to justify a routine use of the method. The aerothrust, which delivers over 20,000 cubic feet of air per minute, has been placed in the hold and allowed to run during fumigation, using test animals in boxes with varying numbers of one-fourth inch holes. This gave much better results than are ordinarily obtained. In addition the current caused by the aerothrust in the hold rapidly cleared it of gas when the hatch covers were removed.

There are practical difficulties to the routine use of fans during fumigation, but if these are overcome the proceedure will be of considerable value. Electric fans are often found in the living quarters of vessels or in buildings, and when possible these should be used when such places are fumigated.

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CEREBROSPINAL MENINGITIS.

Recent Prevalence in Certain States.

The following table gives the number of cases of epidemic cerebrospinal meningitis reported in those States in which the reports of the health departments have indicated the presence of the disease. The data were brought up to May 8 by telegraphic reports from the several State health departments. (See also Public Health Reports of May 4, 1917, page 661.)

	Cases.
Connecticut (Mar. 1-May 9):	
Fairfield County—	
Bridgeport	13
Hartford County—	
Hartford and vicinity	111
New Haven County—	
New Haven	9
Waterbury	5
Other counties	10
Total	148
District of Columbia (Mar. 1-May 8)	10
Illinois (Mar. 1-May 7):	
Cook County	43
Franklin County	3
La Salle County	2
Peoria County	5
St. Clair County	2
Will County	4
Williamson County	5
Other counties	9
Total	73
Indiana (Mar. 1-31):	
Lake County	3
Marion County	15
Owen County	2
Other counties	2
Total	22
Kansas (Mar. 1-Apr. 30):	
Butler County	2
Franklin County	3
Gove County	2
Wyandotte County—	
Kansas City	23
Other counties	10
Total	40
Maryland (Mar. 1-May 8):	
Baltimore County—	
Sparrows Point	10
Other counties	8
Total	18
Massachusetts (Mar. 1-May 8)	30
No unusual prevalence.	
Michigan (Mar. 1-May 8)	10
No two cases in any one county.	
Minnesota (Mar. 1-May 8):	
Hennepin County	7
Minneapolis	93
Ramsey County—	
St. Paul	28
St. Louis County	4
Duluth	7
Other counties	30
Total	169

CEREBROSPINAL MENINGITIS—Continued.

New York (Mar. 1-May 8):	Cases.
New York City	90
Remainder of State	33
Total	123
Ohio (Apr. 1-30):	
Cuyahoga County—	
Cleveland	34
Franklin County—	
Columbus	3
Hamilton County—	
Cincinnati	4
Mahoning County—	
Youngstown	5
Trumbull County—	
Liberty Township	7
Lordstown Township	3
Other counties	23
Total	79

Pennsylvania (Jan. 1-Apr. 30):	Cases.
Philadelphia County—	
Philadelphia	111
Allegheny County—	
Pittsburgh	48
Other counties	125
Total	284
Rhode Island (Mar. 1-May 8):	
Newport County—	
Portsmouth	1
Providence County—	
Providence	16
Total	17
Wisconsin (Mar. 1-May 8):	
Milwaukee County	12
Other counties	24
Total	36

Hawaii Report for March, 1917.

During the month of March three cases of cerebrospinal meningitis were reported in Honolulu, Hawaii.

City Reports for Week Ended Apr. 21, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.	5	3	Minneapolis, Minn.	10	.....
Binghamton, N. Y.	1	1	Newark, N. J.	1	1
Boston, Mass.	2	2	New Britain, Conn.	1	.....
Bridgeport, Conn.	2	1	New Castle, Pa.	1	.....
Buffalo, N. Y.	1	1	New Haven, Conn.	3	1
Chicago, Ill.	9	7	New York, N. Y.	5	3
Cleveland, Ohio.	8	4	Norristown, Pa.	1	.....
Columbus, Ohio.	2	.....	Omaha, Nebr.	2	2
Dayton, Ohio.	1	1	Philadelphia, Pa.	47	14
Denver, Colo.	.....	1	Pittsburgh, Pa.	17	7
Detroit, Mich.	4	1	Providence, R. I.	4	.....
Duluth, Minn.	.....	1	Rochester, N. Y.	.....	1
Evansville, Ind.	.....	1	Saginaw, Mich.	.....	1
Hartford, Conn.	4	2	St. Joseph, Mo.	2	.....
Jersey City, N. J.	.....	2	St. Louis, Mo.	7	5
Kansas City, Kans.	3	.....	San Francisco, Cal.	1	1
Kansas City, Mo.	3	2	Toledo, Ohio.	1	.....
Medford, Mass.	1	.....	Washington, D. C.	.....	1
Milwaukee, Wis.	2	2	Wilmington, Del.	1	.....

DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 712.

ERYSIPELAS.

City Reports for Week Ended Apr. 21, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alameda, Cal.	1		Kalamazoo, Mich.	4	2
Ann Arbor, Mich.	2		Kansas City, Mo.	1	4
Binghamton, N. Y.	4		Los Angeles, Cal.	3	2
Boston, Mass.		3	Milwaukee, Wis.	9	
Bridgeport, Conn.	2	1	Nashua, N. H.		1
Brookline, Mass.	1		Newark, N. J.	14	
Buffalo, N. Y.	10	1	New Castle, Pa.	1	
Butler, Pa.	1	1	New York, N. Y.		7
Cambridge, Mass.		2	Omaha, Nebr.	2	
Camden, N. J.	1		Pasadena, Cal.	1	
Chicago, Ill.	43	9	Philadelphia, Pa.	13	5
Cincinnati, Ohio.	3		Pittsburgh, Pa.	18	3
Cleveland, Ohio.	15	2	Providence, R. I.	1	
Cumberland, Md.	2		Rochester, N. Y.	4	1
Dayton, Ohio.	1		St. Louis, Mo.	25	1
Denver, Colo.	2		St. Paul, Minn.	7	1
Detroit, Mich.	14		San Diego, Cal.	1	
Duluth, Minn.	2		San Francisco, Cal.	2	2
El Paso, Tex.		1	Schenectady, N. Y.	1	1
Erie, Pa.	1		Somerville, Mass.		1
Hartford, Conn.	3		Williamsport, Pa.	1	
Jackson, Mich.	1				

MALARIA.

City Report for Week Ended Apr. 21, 1917.

During the week ended April 21, 1917, one case of malaria was reported in Los Angeles, Cal.

MEASLES.

California—Los Angeles.

Senior Surg. Brooks reported that during the week ended April 28, 1917, 354 cases of measles were notified in Los Angeles, Cal.

Georgia—Savannah.

Passed Asst. Surg. Ridlon reported that during the period from April 15 to May 5, 1917, 80 cases of measles were notified in Savannah, Ga.

Washington—Seattle.

Surg. Lloyd reported that during the week ended April 21, 1917, 135 cases of measles were notified in Seattle, Wash., making a total of 7,980 cases reported since February 15, 1916.

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 712.

PELLAGRA.

City Reports for Week Ended Apr. 21, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Austin, Tex.		2	Charleston, S. C.		2
Birmingham, Ala.	4		Nashville, Tenn.	5	
Boston, Mass.	1	1			

PNEUMONIA.

City Reports for Week Ended Apr. 21, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Allentown, Pa	1		Los Angeles, Cal	11	8
Baltimore, Md	13	24	Manchester, N. H	4	4
Binghamton, N. Y	5	5	Newark, N. J	42	10
Canton, Ohio	1	2	New Castle, Pa	4	
Chicago, Ill	264	158	Pasadena, Cal	1	1
Cleveland, Ohio	21	30	Philadelphia, Pa	108	79
Dayton, Ohio	4	4	Pittsburgh, Pa	40	23
Detroit, Mich	24	50	Racine, Wis	2	2
Duluth, Minn	12	6	Reading, Pa	5	2
Flint, Mich	4		Rochester, N. Y	16	2
Grand Rapids, Mich	2	6	San Diego, Cal	2	2
Harrisburg, Pa	2	7	San Francisco, Cal	5	8
Jackson, Mich	2		Schenectady, N. Y	3	1
Kalamazoo, Mich	1		Springfield, Ill	1	6
Kansas City, Mo	6	21	Toledo, Ohio	8	11
Lancaster, Pa	2		Wichita, Kans	2	
Lincoln, Nebr	2	2	York, Pa	2	

POLIOMYELITIS (INFANTILE PARALYSIS).

City Reports for Week Ended Apr. 21, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Los Angeles, Cal	1	1	New York, N. Y	2	
Newark, N. J	1		Philadelphia, Pa	1	
New Haven, Conn	1				

RABIES IN ANIMALS.

South Carolina—Spartanburg.

Passed Asst. Surg. Grimm reported that one case of rabies in a dog was reported at Spartanburg, S. C., May 4, 1917. A case also occurred at the same place in March, 1917. Both cases were proved positive by laboratory examination.

City Reports for Week Ended Apr. 21, 1917.

During the week ended April 21, 1917, one case of rabies in animals was reported in Buffalo, N. Y., and two cases were reported in Detroit, Mich.

ROCKY MOUNTAIN SPOTTED FEVER.

Washington—Odessa.

Collaborating Epidemiologist Tuttle reported May 3, 1917, that a case of Rocky Mountain spotted fever had been notified at Odessa, Lincoln County, Wash.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 712.

SMALLPOX.

Connecticut.

Collaborating Epidemiologist Black reported that during the week ended May 5, 1917, 12 cases of smallpox were notified in Connecticut as follows: Berlin 4, Hartford 1, Southington 4, Waterbury 2, Watertown 1. No cases of smallpox were notified in the State during the week ended April 28, 1917.

Illinois—Cairo.

Acting Asst. Surg. Barrows reported that during the week ended April 28, 1917, one case of smallpox was notified at Cairo, Ill., and that on April 29 two additional cases were notified, making a total of 22 cases of the disease reported in Cairo and vicinity since January 1, 1917.

Minnesota.

Collaborating Epidemiologist Bracken reported that during the week ended May 5, 1917, seven new foci of smallpox infection were reported in Minnesota, cases of the disease having been notified as follows: Hennepin County, Eden Prairie Township, 1; Itasca County, Mardel, 1; Lincoln County, Arco, 1; Meeker County, Harvey Township, 3; Olmsted County, Stewartville, 2; Ottertail County, Parkers Prairie, 2; Todd County, Staples, 6.

Oklahoma—Kusa.

Asst. Surg. Slaughter reported May 8, 1917, the occurrence of an epidemic of smallpox of the mild type in Kusa, Okla., where an estimate placed the number of cases present at 60 in a population of about 2,000.

Texas—Galveston.

Surg. Bahrenburg reported that on May 7, 1917, two cases of smallpox were notified in Galveston, Tex., and on May 8 one additional case was notified, making a total of 19 cases reported in that city since February 19, 1917.

SMALLPOX—Continued.

Montana Report for January, 1917.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Montana:						
Blaine County	1				1	
Cascade County	16				16	
Great Falls	9					9
Chouteau County	1				1	
Custer County	1				1	
Fergus County	5				5	
Flathead County	6				6	
Kalispell	2					2
Gallatin County	10				10	
Hill County	20			1	19	
Jefferson County	1				1	
Lewis and Clark County	5				5	
Helena	1				1	
Lincoln County	6				6	
Madison County	3					3
Missoula County	7				7	
Phillips County	1		1			
Powell County	1				1	
Prairie County	4				4	
Richland County	1					1
Sheridan County	11				11	
Silverbow County	9		2		7	
Butte	50					50
Teton County	7		1		6	
Valley County	1					1
Yellowstone County—						
Billings	1				1	
Total	180		4	1	109	66

Montana Report for February, 1917.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Montana:						
Cascade County	3				3	
Great Falls	4				4	
Chouteau County	1					1
Custer County	1				1	
Fergus County	3				3	
Flathead County	1					1
Gallatin County	3				3	
Granite County	1				1	
Hill County	19			2	17	
Jefferson County	2			1	1	
Lewis and Clark County—						
Helena	3				3	
Lincoln County	11				11	
Missoula County	4				4	
Musselshell County	4		1		3	
Park County—						
Livingston	1					1
Richland County	15				15	
Sheridan County	7			1	6	
Silverbow County	5					5
Butte	47					47
Teton County	1				1	
Valley County	3			1	2	
Yellowstone County	1				1	
Total	140		1	5	79	55

SMALLPOX—Continued.

Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Colorado (Mar. 1-31):			Oregon (Mar. 1-31):		
Boulder County	9	.....	Clatsop County	13	.....
El Paso County	2	.....	Multnomah County—		
Montrose County	8	.....	Portland	7	.....
Total	19	.....	Total	20	.....

City Reports for Week Ended Apr. 21, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Austin, Tex	4	3	Los Angeles, Cal	2	.....
Birmingham, Ala	2	.....	Madison, Wis	1	.....
Buffalo, N. Y	1	.....	Milwaukee, Wis	1	.....
Cairo, Ill	6	.....	Minneapolis, Minn	34	.....
Chicago, Ill	3	.....	Nashville, Tenn	2	.....
Cleveland, Ohio	10	.....	New Orleans, La	5	.....
Covington, Ky	2	.....	Oakland, Cal	1	.....
Danville, Ill	5	.....	Oklahoma City, Okla	6	.....
Davenport, Iowa	4	.....	Omaha, Nebr	4	.....
Detroit, Mich	7	.....	Pittsburgh, Pa	1	.....
Dubuque, Iowa	1	.....	Pontiac, Mich	3	.....
Duluth, Minn	6	.....	Portland, Oreg	1	.....
East Chicago, Ind	11	.....	Roanoke, Va	1	.....
El Paso, Tex	1	.....	St. Joseph, Mo	11	.....
Evansville, Ind	1	.....	St. Louis, Mo	13	.....
Flint, Mich	1	.....	St. Paul, Minn	4	.....
Grand Rapids, Mich	1	.....	Salt Lake City, Utah	1	.....
Indianapolis, Ind	12	.....	San Francisco, Cal	2	.....
Jackson, Mich	1	.....	Springfield, Ill	1	.....
Kansas City, Mo	5	1	Steelton, Pa	2	.....
Kokomo, Ind	1	.....	Toledo, Ohio	1	.....
La Crosse, Wis	1	.....	Washington, D. C	1	.....
Little Rock, Ark	7	.....	Wichita, Kans	3	.....

TETANUS.

City Reports for Week Ended Apr. 21, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Ann Arbor, Mich	1	.....	Philadelphia, Pa	1	1
Charleston, S. C	.....	1	Pittsfield, Mass	1	1
New Orleans, La	.....	2			

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 712.

TYPHOID FEVER.

Massachusetts—Gardner.

Collaborating Epidemiologist Kelley reported that during the period from March 1 to April 30, 1917, 20 cases of typhoid fever were notified in Gardner, Mass. The infection was suspected to be from milk supplies.

TYPHOID FEVER—Continued.

State Reports for March, 1917.

Place.	New cases reported.	Place.	New cases reported.
Hawaii:		Oregon:	
Hawaii—		Baker County	1
North Hilo district	1	Clatsop County	3
Oahu—		Columbia County	1
Ewa district	1	Jackson County	1
Honolulu	7	Linn County	1
Waialua district	1	Multnomah County—	
		Portland	1
Total	10	Total	8

Montana Report for January, 1917.

Place.	New cases reported.	Place.	New cases reported.
Montana:		Montana—Continued.	
Big Horn County	1	Lewis and Clark—	
Blaine County	112	Helena	1
Cascade County—		Musselshell County	7
Great Falls	1	Valley County	1
Custer County	8	Yellowstone County	3
Dawson County	1	Billings	1
Hill County	1		
Jefferson County	1	Total	138

Montana Report for February, 1917.

Place.	New cases reported.	Place.	New cases reported.
Montana:		Montana—Continued.	
Blaine County	16	Missoula County—	
Cascade County—		Missoula	1
Great Falls	1	Musselshell County	24
Chouteau County	3	Rosebud County	1
Custer County	3	Sheridan County	1
Hill County	1	Yellowstone County	4
Jefferson County	1		
Madison County	1	Total	57

City Reports for Week Ended Apr. 21, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, N. Y.	4		Erie, Pa.	2	
Baltimore, Md.	6	2	Evansville, Ind.	1	
Beaver Falls, Pa.	6		Fall River, Mass.	1	
Binghamton, N. Y.	1		Flint, Mich.	1	
Birmingham, Ala.	13		Fort Worth, Tex.	1	
Boston, Mass.	2		Galesburg, Ill.	1	
Buffalo, N. Y.	2		Grand Rapids, Mich.		2
Butler, Pa.	2		Jersey City, N. J.		1
Canton, Ohio.		1	Kansas City, Mo.	1	1
Charleston, S. C.	4		Kenosha, Wis.	1	
Chicago, Ill.	7	2	Kokomo, Ind.	1	
Cincinnati, Ohio.	5	1	La Crosse, Wis.	1	
Cleveland, Ohio.	3	1	Lincoln, Nebr.	2	
Dayton, Ohio.	1		Los Angeles, Cal.	1	
Detroit, Mich.	2	2	Lowell, Mass.		1
East Chicago, Ind.	1		Milwaukee, Wis.	3	2

TYPHOID FEVER—Continued.

City Reports for Week Ended Apr. 21, 1917—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Minneapolis, Minn	3	.....	San Francisco, Cal	4	.....
Nashville, Tenn	2	.....	Schenectady, N. Y	1	.....
Newburyport, Mass	1	.....	Somerville, Mass	3	.....
New Haven, Conn	1	.....	South Bend, Ind	2	.....
New Orleans, La	4	1	Springfield, Ill	5	.....
New York, N. Y	8	3	Toledo, Ohio	3	.....
Pasadena, Cal	1	.....	Topeka, Kans	1	.....
Philadelphia, Pa	4	1	Trenton, N. J	1	.....
Pittsburgh, Pa	3	.....	Troy, N. Y	1	.....
Portland, Me	5	.....	Washington, D. C	4	.....
Providence, R. I	3	.....	Wilkes-Barre, Pa	4	1
Reading, Pa	1	.....	Wilkinsburg, Pa	5	.....
Saginaw, Mich	1	.....	Williamsport, Pa	.....	1
St. Louis, Mo	7	.....	Winston-Salem, N. C	1	.....
St. Paul, Minn	1	.....	Zanesville, Ohio	4	2
Salt Lake City, Utah	1	.....			

TYPHUS FEVER.

Texas.

Senior Surg. Pierce reported that during the week ended April 28, 1917, one new case of typhus fever was notified at El Paso, Tex., making a total of 82 cases reported at points along the Texas-Mexico border since July 1, 1916.

During the same week 75,649 persons were inspected by medical officers at ports of entry on the border. Of this number 4,792 were disinfected for destruction of vermin, 2,277 were vaccinated, 1 person was turned back on account of refusing disinfection, and 10 were refused admission because of illness.

City Report for Week Ended Apr. 21, 1917.

During the week ended April 21, 1917, one case of typhus fever was reported in El Paso, Tex.

PREVENTABLE DISEASES.

California Report for Week Ended Apr. 21, 1917.

The State Board of Health of California reported in relation to preventable diseases in California during the week ended April 21, 1917, as follows: Measles has been epidemic at many places in the State for the past six weeks, but shows a falling off during this week, particularly in the larger cities. A total of 971 cases was reported in the State for the week, while 1,252 cases were reported during the preceding week. Chickenpox increased considerably during the week, especially in southern California. At Los Angeles 163 cases of this disease were reported for the week, and only 36 cases the week before. Mumps is prevalent in the northern section of the State.

At Alameda and Oakland and in Sonoma County and the counties in the upper Sacramento Valley considerable increases in the number of cases were reported. As regards smallpox, one case was reported in Oakland, two cases in Los Angeles, and two in San Francisco. Thirteen cases of typhoid fever were reported, three of them in Butte County, one in Los Angeles, one in Pasadena, one in San Bernardino, four in San Francisco, one in Stockton, and one in Modesto. Whooping cough is scattered throughout the State, and many adults have been affected.

Preventable diseases reported in California during the week ended Apr. 21, 1917.

Disease.	Cases reported.	Disease.	Cases reported.
Cerebrospinal meningitis	3	Pneumonia	33
Chicken pox	228	Scarlet fever	88
Diphtheria	39	Smallpox	5
Erysipelas	10	Syphilis	47
Gonorrhea	55	Tuberculosis	134
Malaria	3	Typhoid fever	13
Measles	971	Whooping cough	60
Mumps	271		

Massachusetts Report for Week Ended Apr. 21, 1917.

Disease.	Cases reported.	Disease.	Cases reported.
Cerebrospinal meningitis	2	Poliomyelitis (infantile paralysis)	1
Chicken pox	155	Scarlet fever	157
Diphtheria	153	Septic sore throat	39
Dog bite	1	Tetanus	1
Dysentery	1	Trachoma	1
German measles	205	Tuberculosis (pulmonary)	195
Measles	749	Tuberculosis (other forms)	13
Mumps	217	Typhoid fever	13
Ophthalmia neonatorum	491	Whooping cough	53
Pellagra	1		

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for January, February, and March, 1917.

During the month of January 15 cases of diphtheria, 497 cases of measles, and 82 cases of scarlet fever were reported in Montana; 19 cases of diphtheria, 526 cases of measles, and 44 cases of scarlet fever were reported during February by the same State. During the month of March 5 cases of diphtheria and 13 cases of measles were reported in Hawaii, and 19 cases of diphtheria, 1,128 cases of measles, and 128 cases of scarlet fever were reported in Oregon.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended Apr. 21, 1917.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md	589,621	247	14	1	182	3	23	.....	45	28
Boston, Mass	756,476	.....	52	7	198	2	49	1	69	25
Chicago, Ill	2,497,722	921	202	25	1,060	10	468	23	203	83
Cleveland, Ohio	674,073	.....	32	2	105	2	16	.....	37	29
Detroit, Mich	571,784	273	69	4	117	.....	237	7	34	32
Los Angeles, Cal	503,812	134	5	1	285	.....	12	1	55	25
New York, N. Y	5,602,841	1,728	250	32	1,011	27	179	4	262	206
Philadelphia, Pa	1,709,518	640	89	9	159	4	49	1	101	81
Pittsburgh, Pa	579,090	.....	33	7	120	2	11	.....	22	20
St. Louis, Mo	757,309	252	78	3	498	7	88	2	62	24
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y	468,558	144	11	2	44	.....	17	2	40	9
Cincinnati, Ohio	410,476	125	9	.....	55	2	16	.....	33	15
Jersey City, N. J	306,345	110	4	4	40	3	30	.....	18	10
Milwaukee, Wis	436,535	130	15	1	47	.....	95	2	28	8
Minneapolis, Minn	363,454	.....	20	.....	17	.....	25	.....	.....	.....
Newark, N. J	408,894	131	13	1	105	.....	16	.....	69	22
New Orleans, La	371,747	.....	7	.....	10	.....	2	.....	39	28
San Francisco, Cal	463,516	153	17	2	177	1	20	.....	28	22
Washington, D. C	363,980	143	5	.....	212	.....	13	.....	19	17
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio	214,878	71	6	1	22	.....	34	.....	5	9
Denver, Colo	260,800	.....	23	.....	178	.....	4	.....	.....	14
Indianapolis, Ind	271,708	.....	6	.....	597	.....	24	.....	11	.....
Kansas City, Mo	297,847	.....	11	3	121	1	86	1	1	7
Portland, Oreg	295,463	53	1	.....	45	1	21	.....	2	6
Providence, R. I	254,960	87	9	2	24	.....	.....	.....	.....	13
Rochester, N. Y	256,417	84	7	1	52	2	45	4	12	8
St. Paul, Minn	247,232	61	9	.....	161	.....	14	.....	12	8
From 100,000 to 200,000 inhabitants:										
Albany, N. Y	104,199	.....	2	.....	39	.....	7	.....	14	.....
Birmingham, Ala	181,762	88	1	.....	144	7	1	.....	8	12
Bridgeport, Conn	121,579	46	4	2	29	1	11	.....	2	2
Cambridge, Mass	112,981	37	13	.....	58	1	4	.....	6	6
Camden, N. J	106,233	.....	3	.....	1	.....	2	.....	5	.....
Dayton, Ohio	127,224	40	9	1	55	.....	11	.....	6	1
Fall River, Mass	128,366	55	4	1	45	4	5	.....	17	4
Fort Worth, Tex	104,562	19	.....	.....	16	.....	2	.....	.....	.....
Grand Rapids, Mich	128,291	49	8	2	233	4	21	.....	8	2
Hartford, Conn	110,900	40	3	.....	11	.....	9	.....	10	1
Lawrence, Mass	100,560	23	4	1	1	.....	.....	.....	1	5
Lowell, Mass	113,245	44	10	1	7	.....	.....	.....	5	3
Lynn, Mass	102,425	29	2	.....	4	.....	5	.....	3	4
Nashville, Tenn	117,057	53	.....	.....	32	.....	5	.....	2	3
New Bedford, Mass	118,158	32	1	.....	9	.....	2	.....	13	2
New Haven, Conn	149,685	.....	4	.....	112	.....	1	.....	3	5
Oakland, Cal	198,604	.....	1	.....	25	.....	13	.....	1	1
Omaha, Nebr	165,470	37	5	.....	54	.....	34	1	.....	5
Reading, Pa	109,381	36	2	.....	2	.....	5	.....	6	3
Richmond, Va	156,687	47	2	.....	101	.....	2	.....	2	.....
Salt Lake City, Utah	117,399	.....	.....	.....	7	.....	18	2	1	.....
Springfield, Mass	105,942	41	4	1	33	1	2	.....	4	3
Syracuse, N. Y	155,624	59	7	.....	67	.....	23	2	6	9
Toledo, Ohio	191,554	73	5	.....	45	.....	55	.....	7	14
Trenton, N. J	111,593	46	3	.....	6	.....	.....	.....	7	7
Worcester, Mass	163,314	62	6	1	3	1	9	.....	8	5
From 50,000 to 100,000 inhabitants:										
Allentown, Pa	63,505	21	1	.....	4	.....	4	.....	1	.....
Atlantic City, N. J	57,660	.....	1	.....	44	.....	1	.....	3	.....
Bayonne, N. J	69,893	.....	3	.....	2	.....	2	.....	.....	.....
Berkeley, Cal	57,653	9	2	.....	30	.....	3	.....	.....	.....
Binghamton, N. Y	53,973	43	11	1	26	.....	6	.....	7	2
Brockton, Mass	67,449	15	.....	.....	.....	.....	.....	.....	8	.....
Canton, Ohio	60,852	20	4	.....	6	.....	6	.....	2	2

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended Apr. 21, 1917—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhabitants—Continued.										
Charleston, S. C.	60,734	31	2	.....	2	.....	1	.....	.....	2
Covington, Ky.	57,144	29	3	.....	5	1	1	1	2	6
Duluth, Minn.	94,495	20	1	.....	18	.....	4	.....	3	1
Elizabeth, N. J.	86,690	18	10	.....	33	.....	.....	.....	11	2
El Paso, Tex.	63,705	57	.....	1	59	3	2	.....	.....	8
Erie, Pa.	75,195	.....	1	.....	42	.....	4	.....	14	25
Evansville, Ind.	76,078	32	2	.....	54	2	.....	.....	.....	2
Flint, Mich.	54,772	.....	3	.....	15	.....	16	.....	6	1
Fort Wayne, Ind.	76,183	24	1	.....	4	.....	.....	.....	2	1
Harrisburg, Pa.	72,015	33	2	.....	9	.....	1	.....	5	3
Hoboken, N. J.	77,214	14	1	.....	2	1	5	.....	3	2
Johnstown, Pa.	68,529	25	3	.....	13	.....	20	1	1	.....
Kansas City, Kans.	99,437	.....	1	.....	25	.....	17	.....	3	.....
Lancaster, Pa.	50,853	.....	3	.....	26	.....	.....	.....	2	.....
Little Rock, Ark.	57,343	21	.....	.....	6	.....	.....	.....	.....	.....
Malden, Mass.	51,155	16	2	1	27	1	2	.....	1	1
Manchester, N. H.	78,283	36	2	1	7	.....	3	.....	1	1
Mobile, Ala.	58,221	23	.....	.....	14	.....	.....	.....	3	1
New Britain, Conn.	53,794	3	2	.....	.....	.....	8	.....	.....	1
Norfolk, Va.	89,612	.....	1	.....	35	.....	.....	.....	.....	7
Oklahoma City, Okla.	92,943	22	.....	.....	7	.....	3	.....	.....	1
Passaic, N. J.	71,744	19	2	1	5	.....	1	.....	3	4
Portland, Me.	63,867	15	2	.....	5	.....	3	.....	.....	.....
Rockford, Ill.	55,185	.....	2	1	18	.....	7	.....	12	2
Sacramento, Cal.	66,895	20	1	.....	6	.....	.....	.....	1	2
Saginaw, Mich.	55,642	23	.....	.....	10	.....	15	.....	1	2
St. Joseph, Mo.	85,236	27	1	.....	9	.....	7	.....	.....	.....
San Diego, Cal.	53,330	20	1	.....	28	.....	.....	.....	.....	1
Schenectady, N. Y.	99,519	24	3	.....	73	1	3	.....	3	2
Somerville, Mass.	87,039	16	6	.....	6	.....	1	.....	2	.....
South Bend, Ind.	68,946	17	.....	.....	7	.....	12	.....	.....	2
Springfield, Ill.	61,120	17	2	.....	3	.....	1	.....	.....	3
Troy, N. Y.	77,916	.....	1	.....	48	.....	8	.....	3	3
Wichita, Kans.	70,722	.....	.....	.....	90	.....	3	.....	1	.....
Wilkes Barre, Pa.	76,776	21	4	.....	4	.....	1	.....	2	.....
Wilmington, Del.	91,265	32	1	.....	3	.....	.....	.....	.....	.....
York, Pa.	51,656	.....	1	.....	1	.....	.....	.....	3	.....
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.	27,732	4	2	.....	11	.....	1	.....	.....	.....
Auburn, N. Y.	37,385	7	1	.....	.....	.....	2	.....	.....	2
Austin, Tex.	34,814	17	1	.....	.....	.....	.....	.....	.....	2
Brookline, Mass.	32,730	10	.....	.....	5	.....	1	.....	1	1
Butler, Pa.	27,632	6	1	.....	1	.....	1	.....	.....	.....
Butte, Mont.	43,425	38	.....	.....	24	.....	1	2	.....	4
Chelsea, Mass.	46,192	14	2	.....	2	.....	2	.....	1	.....
Chicopee, Mass.	29,319	11	.....	.....	.....	.....	.....	.....	.....	1
Cumberland, Md.	26,074	6	2	.....	3	.....	.....	.....	3	1
Danville, Ill.	32,261	17	.....	.....	3	.....	.....	.....	2	2
Davenport, Iowa.	48,811	.....	.....	.....	1	.....	2	.....	.....	.....
Dubuque, Iowa.	39,873	.....	2	.....	7	.....	3	.....	2	2
East Chicago, Ind.	28,743	5	.....	.....	41	2	3	.....	.....	.....
East Orange, N. J.	42,458	7	.....	.....	5	.....	4	.....	4	.....
Elgin, Ill.	28,203	4	.....	.....	24	.....	4	.....	1	.....
Everett, Mass.	39,233	4	5	.....	9	.....	1	.....	2	.....
Everett, Wash.	35,486	3	2	.....	15	.....	.....	.....	1	.....
Fitchburg, Mass.	41,781	7	3	.....	3	.....	2	1	3	.....
Galveston, Tex.	41,863	13	.....	.....	.....	.....	.....	.....	1	1
Haverhill, Mass.	48,477	.....	3	.....	7	.....	1	1	4	2
Jackson, Mich.	35,363	12	2	.....	17	.....	3	.....	1	.....
Kalamazoo, Mich.	48,886	22	.....	.....	2	.....	.....	.....	.....	2
Kenosha, Wis.	31,576	12	.....	.....	57	.....	1	.....	.....	1
Kingston, N. Y.	26,771	16	.....	.....	.....	.....	1	.....	1	1
Knoxville, Tenn.	38,676	.....	1	.....	4	.....	.....	.....	2	.....
La Crosse, Wis.	31,677	8	3	.....	.....	.....	3	.....	.....	.....
Lexington, Ky.	41,097	12	.....	.....	20	.....	.....	.....	.....	1
Lincoln, Nebr.	46,515	18	1	.....	87	.....	34	.....	.....	1
Long Beach, Cal.	27,587	6	.....	.....	2	.....	.....	.....	.....	.....

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended Apr. 21, 1917—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
Lorain, Ohio	36,964				1		4			
Lynchburg, Va	32,940	9	2		3				2	1
Madison, Wis	30,699						16			
Medford, Mass	26,234	12	2		11		2		2	1
Montclair, N. J	26,318	1			2				1	
Nashua, N. H	27,327	17			35					1
Newburgh, N. Y	29,603	10	1		1					3
New Castle, Pa	41,133		1		2		2			
Newport, Ky	31,927	9							2	2
Newport, R. I	30,108	4	1							
Newton, Mass	43,715	8			16	1	1			
Niagara Falls, N. Y	37,353	18	1		16		1			2
Norristown, Pa	31,401	5	1		1					1
Ogden, Utah	31,404	9			2		9			
Orange, N. J	33,080	8	1		6		1		4	
Pasadena, Cal	46,450	16			11				9	4
Perth Amboy, N. J	41,185		1		1		1		2	
Pittsfield, Mass	38,629	14	1		29		1		1	1
Portsmouth, Va	39,651	12			22		4			1
Quincy, Ill	36,798	13			5		4			2
Quincy, Mass	38,136	10					1		1	1
Racine, Wis	46,486	12							3	2
Roanoke, Va	43,284	15	1		23	1	1			2
San Jose, Cal	38,902				7				1	
Steubenville, Ohio	27,445	5								
Superior, Wis	46,226	7	3		1					2
Taunton, Mass	36,283	13	1		2	1	2		1	3
Topeka, Kans	48,726	5	3		41		4		2	
Waltham, Mass	30,570	7	1		1				1	
West Hoboken, N. J	43,139	3	2		6		3		1	
Wheeling, W. Va	43,377	16	2		1		1		2	1
Williamsport, Pa	33,809	4	6		48	3	1			
Wilmington, N. C	29,898	10			10					2
Winston-Salem, N. C	31,155	13					1	1	3	3
Zanesville, Ohio	30,863	13								
From 10,000 to 25,000 inhabitants:										
Ann Arbor, Mich	15,010	11			33		8		7	
Beaver Falls, Pa	13,532				2					
Braddock, Pa	21,685		1		1		1			
Cairo, Ill	15,593	7			8					
Clinton, Mass	[1] 13,075	2			10				1	
Coffeyville, Kans	17,548				7				1	
Concord, N. H	22,480	14			19		4			
Galesburg, Ill	22,923	9			5					
Kearny, N. J	22,753	9			2		1			2
Kokomo, Ind	20,312	7	1		1				3	
Long Branch, N. J	15,057	6			24		2			
Marinette, Wis	[1] 14,610	7								
Melrose, Mass	17,445	4	1		1		1		1	
Morristown, N. J	13,158	10			3				1	1
Nanticoke, Pa	22,441	2	2							
Newburyport, Mass	15,195	3	1		19	1				
New London, Conn	20,771	8			3					
North Adams, Mass	[1] 22,019	10			1		3			
Northampton, Mass	19,846	9			17				4	1
Plainfield, N. J	23,280	13			7		2		1	1
Pontiac, Mich	17,524		2		8		20			
Portsmouth, N. H	11,602		1		1		6			
Rocky Mount, N. C	12,067	6			1				1	
Rutland, Vt	14,624	5					1			
Sandusky, Ohio	20,160	7	1		3					
Saratoga Springs, N. Y	12,842	8			1		1		2	1
Steelton, Pa	15,337	2	1		4		1		4	
Wilkinsburg, Pa	22,361	15								
Woburn, Mass	15,862	5								

[1] Population Apr. 15, 1910; no estimate made.

FOREIGN.

ARGENTINA.

Plague—1899–1916.

Plague has been reported present in Argentina as follows: In the year 1899, 40 cases; year 1900, 238 cases; and from 1900 to 1913, present with an average yearly occurrence of about 100 cases. In 1913 an increase in prevalence occurred, with 504 reported cases occurring in 11 Provinces, Misiones Territory, and the Federal Capital. In 1914 there were reported 214 cases, occurring in 9 Provinces and the Federal Capital. In 1915 only 84 cases were reported. In 1916 about 57 cases occurred in the interior of the country during the period from January 1 to April 30.

CHINA.

Plague-Infected Rats—Hongkong.

During the week ended March 24, 1917, out of 2,197 rats examined at Hongkong, 2 were found plague infected.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	Apr. 11–20, 1917.		Remaining under treatment Apr. 20, 1917.	Disease.	Apr. 11–20, 1917.		Remaining under treatment Apr. 20, 1917.
	New cases.	Deaths.			New cases.	Deaths.	
Diphtheria	6	1	4	Scarlet fever	1	.....	3
Leprosy	.....	.....	10	Smallpox	.....	.....	[1] 1
Malaria	10	.....	16	Typhoid fever	9	4	23
Measles	30	.....	35	Varicella	4	.....	9
Paratyphoid fever	.....	.....	2				

[1] From Europe.

UNION OF SOUTH AFRICA.

Status of Plague—Orange Free State.

During the week ended February 18, 1917, 8 new cases of plague, occurring in three new foci of infection, were notified in Winburg district, Orange Free State, making a total of 14 cases reported from the beginning of the outbreak, February 5, 1917.

URUGUAY.

Measures against Importation of Poliomyelitis.

By order of the national council of hygiene, dated January 17, 1917, vessels arriving at ports in Uruguay having on board or having had on board during transit cases of poliomyelitis are required to be thoroughly disinfected, the patients to be removed to their places of residence or to hospital, in the discretion of the sanitary authorities, and the families of the patients to be kept under sanitary observation.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During the Week Ended May 11, 1917.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Calcutta	Feb. 25–Mar. 3		13	
Philippine Islands:				
Manila				Mar. 4–10, 1917: 1 case, not previously reported.
Provinces				Mar. 4–10, 1917: Cases, 152; deaths, 113.
Albay	Mar. 4–10	3	2	
Antique	do	5	4	
Bohol	do	4	2	
Capiz	do	28	25	
Cebu	do	17	8	
Iloilo	do	11	7	
Leyte	do	84	65	
Straits Settlements:				
Singapore	do	2	2	
Turkey in Asia				July–Dec. 31, 1916: Cases, 9,565; deaths, 4,909. Mar. 4–15, 1917: Cases, 8; deaths, 7.
Aleppo	Mar. 5	2	2	Vicinity.
Panderma	Mar. 13	1		
Turkey in Europe:				
Constantinople	Mar. 4–10	2	2	

PLAGUE.

Brazil:				
Bahia	Mar. 18–31	2	2	
China:				
Amoy	Mar. 4–24			Present, and in vicinity.
India				Feb. 25–Mar. 3, 1917: Cases, 22,321; deaths, 17,933.
Bombay	Mar. 4–10	54	49	
Siam:				
Bangkok	Feb. 18–Mar. 10	3	3	
Straits Settlements:				
Singapore	Mar. 4–10		1	
Union of South Africa:				
Orange Free State—				
Winburg district	Feb. 12–18	8	5	Feb. 5–18, 1917: Cases, 14; deaths, 7; 3 new foci of infection.

SMALLPOX.

Brazil:				
Rio de Janeiro	Mar. 11–31	33	6	
China:				
Amoy	Mar. 4–24			Present; and in vicinity.
Chungking	Mar. 11–17			Present.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During the Week Ended May 11, 1917—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China—Continued.				
Dairen	Mar. 11–17	2		
Hongkong	Mar. 18–24	3	3	
Shanghai	Mar. 4–24	1	8	
India:				
Bombay	Mar. 4–10	22	12	
Calcutta	Feb. 25–Mar. 3		1	
Mexico:				
Coatepec	Apr. 18			Epidemic; 6 miles from Jalapa.
Jalapa	....do			Prevalent.
Monterey	Apr. 9–22		2	
Vera Cruz	Mar. 18–Apr. 7	8		
Russia:				
Moscow	Jan. 1–21	86	20	
Petrograd	Jan. 13–Feb. 3	94	35	
Siam:				
Bangkok	Mar. 4–10	1	1	
Straits Settlements:				
Singapore	Mar. 4–10	1		
Sweden:				
Stockholm	Mar. 18–24	1		
Venezuela:				
Maracaibo	Apr. 15–21		2	

TYPHUS FEVER.

Russia:				
Moscow	Jan. 1–21	84	5	
Petrograd	Jan. 13–Feb. 3	25	3	
Venezuela:				
Maracaibo	Apr. 15–21		1	

Reports Received from Dec. 30, 1916, to May 4, 1917.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Macao				Outbreak with 72 cases reported Mar. 1, 1917.
Chosen (Korea)	Aug.–Dec. 29	1,998		
India:				
Bassein	Dec. 31–Mar. 3		44	
Bombay	Nov. 5–Dec. 23	13	12	
Do	Jan. 14–Feb. 10	7	6	
Calcutta	Oct. 15–Dec. 30		161	Oct. 8–14, 1916: Cases, 3.
Do	Dec. 31–Feb. 24		103	
Henzada	Feb. 18–24		1	
Madras	Nov. 5–Dec. 16	5		
Do	Dec. 31–Feb. 10	6	4	Dec. 17–23, 1916: One case.
Moulmein	....do		7	
Rangoon	Nov. 26–Dec. 30	5	6	
Do	Dec. 31–Feb. 17	9	8	
Indo-China				Apr. 1–June 30, 1916: Cases, 4,540; deaths, 2,869.
Do				July 1–Dec. 31, 1916: Cases, 2,984; deaths, 2,398.
Provinces—				
Anam	Apr. 1–June 30	1,381	2,309	
Do	July 1–Dec. 31	700	544	
Cambodia	May 1–June 30	47	13	
Do	July 1–Dec. 31	164	116	
Cochin-China	Apr. 1–June 30	269	111	
Do	July 1–Dec. 31	123	111	
Kwang-Tcheou-Wan	July 1–Nov. 30	271	264	
Laos	Apr. 1–June 30	102	57	
Do	July 1–Nov. 30	652	630	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Indo-China—Continued.				
Provinces—Continued.				
Tonkin	Apr. 1-June 30	2,780	1,385	
Do	July 1-Dec. 31	999	725	
Saigon	Dec. 25-31	4	3	
Do	Jan. 29-Feb. 4	3	3	
Japan:				
Fukuoka	Jan. 19	33		
Nagasaki	Nov. 27-Dec. 3	9	4	
Do	Feb. 19-25	1	1	
Osaka	Nov. 16-Dec. 25	23	57	Aug. 13-Dec. 25, 1916: Cases, 971; deaths, 754.
Do	Dec. 26-Jan. 25	19	10	Jan. 6-16, 1917: Cases, 9. Aug. 14, 1916-Jan. 25, 1917: Cases, 990; deaths, 641.
Taiwan Island—				
Keelung	Nov. 13-Dec. 23	5	7	
Do	Feb. 18-24		1	
Taihoku	do	14	5	
Tokyo	Jan. 23-Feb. 4	4		
Yokohama	Nov. 6-Dec. 3	5	3	
Districts	do	1	1	
Java:				
East Java	Oct. 14-17	5	3	
West Java				Nov. 17-Dec. 14, 1916: Cases, 135; deaths, 65.
Batavia	Nov. 17-Dec. 7	23	9	
Persia:				
Enzeli	Mar. 21-Sept. 9	74	37	
Kazvin	July 18-Sept. 19	107	65	
Mazanderan Province—				
Amol	Nov. 16			Epidemic.
Ferikenar	Nov. 30	8	8	
Recht	Mar. 21-Oct. 14	165	60	
Teheran	Aug. 3-Oct. 18	428	400	At two localities in vicinity: Cases, 64; deaths, 38.
Philippine Islands:				
Manila	Oct. 29-Dec. 30	201	70	Not previously reported: Cases, 54; deaths, 2.
Do	Dec. 31-Feb. 24	14	7	
Provinces				Oct. 29-Dec. 9, 1916: Cases, 4,191; deaths, 2,030. Dec. 17-30, 1916: Cases, 282; deaths, 188. Dec. 31, 1916-Mar. 3, 1917: Cases, 1,524; deaths, 1,125.
Albay	Oct. 29-Dec. 9	246	147	
Do	Dec. 17-30	20	10	
Do	Dec. 31-Mar. 3	60	46	
Antique	Nov. 18-25	8	7	
Do	Dec. 31-Mar. 3	124	87	
Bataan	Oct. 29-Dec. 9	93	77	
Do	Dec. 17-23	2	2	
Do	Dec. 31-Jan. 6	2	3	
Batangas	Oct. 29-Nov. 18	1	1	
Bohol	Oct. 29-Dec. 9	46	18	
Do	Dec. 17-23	1		
Do	Feb. 25-Mar. 3	12	6	
Bulacan	Oct. 29-Dec. 9	96	67	
Do	Dec. 17-23	10	6	
Camarines	Oct. 29-Dec. 9	61	37	
Capiz	do	45	34	
Do	Dec. 17-30	27	23	
Do	Dec. 31-Mar. 3	161	120	
Cavite	Oct. 29-Dec. 9	156	113	
Do	Dec. 17-30	24	13	
Do	Dec. 31-Feb. 10	45	33	
Cebu	Dec. 24-30	12	6	
Do	Jan. 7-Mar. 3	100	55	
Iloilo	Oct. 29-Dec. 9	237	148	
Do	Dec. 17-30	37	31	
Do	Dec. 31-Mar. 3	60	50	
Laguna	Nov. 2-25	12	10	
Leyte	Oct. 29-Dec. 9	127	98	
Do	Dec. 17-30	90	62	
Do	Dec. 31-Mar. 3	438	360	
Masbate	Dec. 17-23	8	2	
Mindanao	Jan. 14-Feb. 3	25	18	
Mindoro	Dec. 31-Feb. 3	8	7	
Misamis	Oct. 29-Dec. 9	126	79	
Do	Dec. 17-30	17	12	
Do	Dec. 31-Feb. 24	49	36	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Continued.				
Provinces—Continued.				
Negros Occidental	Oct. 29–Dec. 9	910	553	
Do	Dec. 24–30	11	5	
Do	Jan. 7–Feb. 10	51	46	
Pampanga	Dec. 3–9	4	3	
Do	Dec. 17–23	6	5	
Do	Dec. 31–Jan. 6	1	1	
Rizal	Oct. 29–Dec. 9	27	14	
Do	Dec. 17–30	4	.....	
Do	Dec. 31–Jan. 27	2	.....	
Romblon	Jan. 28–Mar. 3	31	22	
Samar	Nov. 5–18	13	10	
Do	Dec. 31–Mar. 3	219	172	
Sorsogon	Oct. 29–Dec. 2	131	71	
Do	Dec. 17–23	1	2	
Do	Jan. 21–Mar. 3	107	69	
Tayabas	Nov. 5–18	1	1	
Zambales	Oct. 29–Dec. 2	7	1	
Straits Settlements:				
Singapore	Oct. 22–28	2	2	
Do	Jan. 7–Mar. 3	3	3	
Turkey in Asia	.....	.....	.....	Sept. 22–Dec. 12, 1916: Cases, 258; deaths, 117. July 14, 1916–Jan. 18, 1917: Cases, 9,569; deaths, 4,913.
Aleppo	Dec. 9–15	.....	1	
Do	Jan. 15	2	2	
Bagdad	Nov. 6–30	17	6	
Beirut	Dec. 7–12	2	1	
Panderma	Jan. 8–Mar. 13	2	1	
Rodosto	Jan. 18	1	1	
Tarsus	Nov. 7	1	1	
Turkey in Europe:				
Constantinople	Oct. 1–Nov. 17	8	1	
Do	Mar. 4	1	1	

PLAGUE.

Brazil:				
Bahia	Nov. 5–Dec. 16	15	9	Jan. 1–Nov. 11, 1916: Cases, 14; deaths, 7. Nov. 5–11: Cases, 4; deaths, 2.
Do	Jan. 7–Feb. 24	4	3	
Joazeiro	.....	.....	.....	June 1–Nov. 6, 1916: Cases, 67; deaths, 51.
Pernambuco, State	Jan. 16–Apr. 26	.....	.....	Present in interior cities.
Ceylon:				
Colombo	Oct. 28–Dec. 30	50	30	July 23–29, 1916: Cases, 9; deaths, 8.
Do	Dec. 31–Feb. 10	48	46	
Chile:				
Antofagasta	Mar. 12	2	.....	
Tacna	do	1	.....	
Tocopilla	Sept. 12	1	1	
China:				
Amoy, vicinity	Nov. 19–Dec. 2	.....	.....	Present.
Do	Feb. 18–Mar. 3	.....	.....	Present in vicinity.
Chaochowfu	Feb. 24	.....	.....	Present; 26 miles from Swatow.
Hongkong	Dec. 24–30	1	1	
Do	Jan. 21–Feb. 3	24	12	Present in vicinity.
Kansu Province—				
Taochow	Oct. 1–24	.....	20	Pneumonic. Reported present in other localities in Province.
Nanking	Mar. 4–24	.....	.....	Present.
Ecuador	.....	.....	.....	Sept. 1–Dec. 31, 1916: Cases, 353; deaths, 119.
Duran	Oct. 1–Dec. 31	2	.....	
Guayaquil	Sept. 1–Dec. 31	347	116	Jan. 1–31, 1917; Cases, 106; deaths, 43.
Do	Jan. 1–31	104	43	
Milagro	Nov. 1–Dec. 31	2	1	
Naranjal	Jan. 1–31	1	.....	
Nobol	Oct. 1–31	1	1	
Santa Rosa	Sept. 1–30	1	1	
Taura	Jan. 1–31	1	.....	
Egypt	.....	.....	.....	Jan. 1–Dec. 30, 1916: Cases, 1,702; deaths, 828. Jan. 1–Mar. 27, 1917: Cases, 54; deaths, 32.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt—Continued.				
Alexandria	Nov. 12–Dec. 25	4	3	One case on s. s. Proton, arrived Nov. 16, 1916, from Sifi Barani and Sollum.
Do	Feb. 21–Mar. 22	2	1	
Port Said	Dec. 11	1		
Do	Jan. 18–Mar. 25	10	5	
Provinces—				
Assiout	Mar. 8–9	8	8	
Beni-Souef	Feb. 1	1		
Fayoum	Jan. 24–Mar. 20	11	5	
Girgeh	Mar. 27	6	1	
Keneh	Mar. 20–27	10	7	
Minieh	Jan. 25–Mar. 22	3	3	
Gold Coast:				
Akkra	Apr. 4			Present.
Greece:				
Athens	Apr. 23	2		In military hospital.
Hawaii:				
Paauilo	Mar. 7	1	1	
India				Oct. 15–Dec. 23, 1916: Cases, 89,512; deaths, 67,068. Dec. 31, 1916–Feb. 24, 1917: Cases, 157,878; deaths, 126,539.
Bassein	Oct. 22–Dec. 30		7	
Do	Dec. 31–Mar. 3		74	
Bombay	Nov. 5–Dec. 30	73	59	Oct. 8–14, 1916: Cases, 13; deaths, 7. Received out of date. Original report lost on s. s. Arabia.
Do	Dec. 31–Mar. 3	300	176	
Henzada	Feb. 18–Mar. 3		8	
Karachi	Oct. 29–Dec. 30	4	3	
Do	Dec. 31–Mar. 3	38	23	
Madras	Nov. 19–Dec. 30	7	5	Oct. 8–14, 1916: Case, 1; death, 1.
Do	Dec. 31–Feb. 24	7	5	
Madras Presidency	Nov. 5–Dec. 30	5,854	3,932	Oct. 8–14, 1916: Cases, 534; deaths, 353. Sept. 17–23, 1916: Cases, 429; deaths, 280.
Do	Dec. 31–Mar. 3	6,465	4,540	
Mandalay	Oct. 28–Dec. 30		3	
Do	Feb. 4–Mar. 3		16	
Moulmein	Dec. 3–9		1	
Do	Feb. 4–Mar. 3		11	
Myingyan	....do		3	
Prome	Oct. 22–Dec. 30		177	
Do	Dec. 31–Feb. 17		101	
Rangoon	Oct. 28–Dec. 30	43	39	Oct. 1–7, 1916: Cases, 9; deaths, 9.
Do	Dec. 31–Mar. 3	243	225	
Toungoo	Oct. 22–Dec. 30		12	
Do	Dec. 31–Feb. 24		37	
Indo-China				Apr. 1–June 30, 1916: Cases, 325; deaths, 148. July 1–Dec. 31, 1916: Cases, 230; deaths, 142.
Provinces—				
Anam	Apr. 1–June 30	142	83	
Do	July 1–Dec. 31	75	49	
Cambodia	Apr. 1–June 30	43	41	
Do	July 1–Dec. 31	57	54	
Cochin-China	Apr. 1–June 30	135	63	
Do	July 1–Nov. 30	58	22	
Kwang-Tcheou-Wan	....do	29	8	
Tonkin	Oct. 1–31	2		
Saigon	Nov. 6–Dec. 17	9	3	
Do	Jan. 1–Feb. 25	19	14	
Japan:				
Nagoya	Dec. 10–16	2		
Taiwan Island—				
Shirin	Feb. 18–24	1	1	Three miles from Taihoku.
Tansui	Feb. 15–21	3	3	
Yokkaichi	Nov. 12–Dec. 16	32	12	
Java:				
East Java				Aug. 26–Dec. 31, 1916: Cases, 133; deaths, 116. Jan. 15–Feb. 11, 1917: Cases, 25; deaths, 24.
Djocjakarta Residency	Nov. 4–Dec. 31	2	2	
Do	Jan. 15–28	5	5	
Kediri Residency	Aug. 26–Dec. 31	20	18	
Madioen Residency	....do	8	8	
Pasoeroean Residency	....do	3	3	
Samarang Residency	Dec. 2–31	6	6	
Do	Jan. 29–Feb. 11	5	5	
Surabaya Residency	Aug. 26–Dec. 31	49	49	
Do	Jan. 15–Feb. 11	13	12	
Surakarta Residency	Aug. 25–Dec. 31	28	28	
Do	Jan. 29–Feb. 11	2	1	
Mid-Java—				
Samarang	Aug. 26–Dec. 31	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mauritius	Dec. 9–Feb. 3	20	11	District of Port Louis.
Peru				Jan. 1–Feb. 15, 1917: 101 cases. Jan. 1–June 30, 1916: Cases, 360; deaths, 191. July 1–Dec. 31, 1916: Cases, 150; deaths, 77.
Department—				
Ancachs	Jan. 1–June 30	57	21	
Do	July 1–Dec. 31	5	1	
Arequipa	Jan. 1–June 30	23	18	
Do	July 1–Dec. 31	1	1	
Cajamarca	do	2		
Lambayeque	Jan. 1–June 30	84	32	
Do	July 1–Dec. 31	6	2	
Libertad	Jan. 1–June 30	54	36	
Do	July 1–Dec. 31	75	40	
Lima	Jan. 1–June 30	45	19	
Do	July 1–Dec. 31	40	18	
Callao (province)	Jan. 1–June 30	36	20	
Do	July 1–Dec. 31	4	2	
Piura	Jan. 1–June 30	61	45	
Do	July 1–Dec. 31	17	13	
Ancachs—				
Casma	Jan. 1–Feb. 15	3		
Callao—				
Callao	do	3		
Lambayeque—				
Chiclayo	do	2		
Libertad	do	60		Occurring in Guadalupe, Pacasmayo, Salaverry, San Pedro, Trujillo (city and country), and Viru.
Lima—				
Lima	do	22		City and country.
Piura—				
Catacaos	do	11		
Siam:				
Bangkok	Oct. 22–Dec. 30	12	10	
Do	Jan. 14–Feb. 17	9	7	
Straits Settlements:				
Penang	Jan. 28–Feb. 24	3	2	
Singapore	Oct. 22–Dec. 30	7	7	
Do	Dec. 31–Feb. 24	9	8	
Union of South Africa:				
Cape of Good Hope State—				
Uitenhage district	Oct. 31–Nov. 12	2	2	Total, Oct. 23–Nov. 12, 1916: Cases, 24; deaths, 13.
Orange Free State—				
Winburg district	Feb. 5–11	6	2	On a farm.
Transvaal—				
Potchefstroom district	Dec. 21–Jan. 21	12	12	On 2 adjoining farms.

SMALLPOX.

Australia:				
New South Wales—				
Coonamble	Dec. 8	1		
Queensland—				
Thursday Island, quarantine station.	Feb. 8	1		On steamship St. Albans from Kobe via Hongkong. Vessel proceeded in quarantine to Townsville, Brisbane, and Sydney, arriving Feb. 16. Released Feb. 23.
Austria-Hungary:				
Austria—				
Prague	Jan. 21–27	1		
Vienna	Nov. 12–Dec. 9	8	1	
Do	Feb. 11–Mar. 24	4		
Hungary—				
Budapest	Nov. 5–Dec. 23	73	2	
Do	Dec. 31–Mar. 24	81	11	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia	Nov. 12-Dec. 23	5		
Do	Jan. 7-Mar. 17	9		
Rio de Janeiro	Nov. 12-Dec. 30	50	12	
Do	Dec. 31-Mar. 10	106	31	
Canada:				
Alberta—				
Lethbridge	Feb. 1-28	2		
British Columbia—				
Vancouver	Feb. 18-Apr. 7	2	2	
Victoria	Feb. 11-17	1		
Manitoba—				
Winnipeg	Feb. 11-Apr. 7	6		
Ontario—				
Kingston	Mar. 11-17	1		
Sarnia	Jan. 28-Feb. 10	3		
Toronto	Jan. 28-Mar. 31	6		
Canary Islands:				
Las Palmas	Feb. 25-Mar. 3	1		On American vessel.
Ceylon:				
Colombo	Dec. 31-Jan. 6	1		
China:				
Amoy	Oct. 31-Dec. 9			Present. Dec. 10-16, 1916: Cases, 3.
Do	Feb. 11-Mar. 3			Present in vicinity.
Antung	Jan. 8-14	2	1	
Canton	Nov. 1-Dec. 20		14	
Changsha	Mar. 11-17	3		
Chungking	Oct. 28-Dec. 30			Present.
Do	Dec. 31-Mar. 10			Do.
Dairen	Nov. 5-Dec. 30	63	8	
Do	Dec. 31-Mar. 3	46	17	In vicinity, Jan. 14-20, 1917, 1 case.
Foochow	Oct. 29-Dec. 16			Present.
Harbin	Nov. 6-Dec. 17	3		
Do	Jan. 2-Mar. 11	2		
Hongkong	Oct. 28-Dec. 30	349	243	
Do	Dec. 31-Mar. 17	496	409	Present in vicinity.
Kwangtung Province—				
Chaoyang district	Jan. 21-27			Present. Vicinity of Swatow.
Manchuria Station	Jan. 8-Feb. 25	4		On Chinese Railway.
Mukden	Dec. 9-30			Present.
Do	Dec. 31-Mar. 18			Do.
Nanking	Nov. 12-25			Do.
Shanghai	Jan. 28-Feb. 3	1		
Tientsin	Dec. 17-30	1	1	
Do	Jan. 28-Feb. 3	2		
Tsingtao	Dec. 1-9	3		
Do	Dec. 28-Mar. 29	76	4	
Colombia:				
Espinal	Feb. 17			Present. Suburb of Cartagena.
Cuba:				
Casa Blanca	Jan. 12	1		Vicinity of Habana. Case landed Jan. 1, 1917, from s. s. Alfonso XII, from Santander, Spain.
Encrucijada	Jan. 10	1		In Santa Clara Province. Case landed from s. s. Montevideo, from Barcelona, via Las Palmas, Canary Islands, and Porto Rico; arrived at Habana Jan. 6, 1917.
Guanabacoa	Jan. 9	1		Vicinity of Habana. Case landed from s. s. Montevideo.
Habana	Jan. 10-20	2		At Mariel quarantine station. From s. s. Montevideo.
Ecuador:				
Guayaquil	Nov. 1-30	10	1	
Egypt:				
Alexandria	Dec. 25-31		3	
Do	Jan. 8-Mar. 18	17	7	
Cairo	June 11-July 1	50	20	
Do	July 2-Oct. 21	80	20	
Port Said	June 11-17	1	1	
Do	Aug. 30-Sept. 9	2	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
France:				
Marseille	Oct. 1–Dec. 31		16	
Do	Feb. 1–28		2	
Paris	Dec. 17–23	1		
Do	Jan. 14–20		1	
Germany:				
Barnitz	Jan. 7–13	1		
Bevensen	do	1		
Bomlitz	do	2		
Bremen	Dec. 31–Jan. 27	3		
Celle	Jan. 7–13	1		
Danenberg	do	1		
Dendorf	do	1		
Egestorf	do	1		
Geesthacht	do	2		
Gosewerder	do	2		
Hamburg district	Dec. 31–Jan. 20	71		
Harburg	Jan. 7–13	1		
Husum	do	1		
Lübeck	do	8		
Reinfeld	do	1		
Soltau	do	1		
Undelos	do	1		
Winsen	do	1		
Great Britain:				
Liverpool	Feb. 4–Mar. 3	3	1	
Greece:				
Athens	Jan. 1–Mar. 5		6	
Hawaii:				
Honolulu	Jan. 9	1		From s. s. Tenyo Maru from oriental ports.
Do	Jan. 24	1		From s. s. Ecuador from Hongkong.
India:				
Bombay	Dec. 10–30	5	1	Oct. 8–14, 1916: Cases, 3; deaths, 3. Received out of date. Original report lost on s. s. Arabia.
Do	Dec. 31–Feb. 24	73	21	
Calcutta	Nov. 5–Dec. 2		2	
Do	Feb. 18–24		1	
Karachi	Dec. 31–Jan. 13	2		
Madras	Nov. 5–Dec. 30	35	19	
Do	Dec. 31–Mar. 10	259	42	
Moulmein	Oct. 28–Nov. 14		4	
Rangoon	Oct. 28–Dec. 30	17	1	
Do	Dec. 31–Mar. 3	44	2	
Indo-China:				
Provinces				Apr. 1–June 30, 1916: Cases, 331; deaths, 28. July 1–Dec. 31, 1916: Cases, 503; deaths, 194.
Anam	Apr. 1–June 30	45	8	
Do	July 1–Dec. 31	114	43	
Cambodia	Apr. 1–June 30	30	11	
Do	July 1–Dec. 31	24	10	
Cochin-China	Apr. 1–June 30	44	5	
Do	July 1–Dec. 31	336	99	
Laos	Aug. 1–Oct. 31	39	16	
Tonkin	Apr. 1–June 30	215	4	
Do	July 1–Dec. 31	69	25	
Saigon	Nov. 6–Dec. 31	28	7	
Do	Jan. 1–Mar. 4	162	40	
Italy:				
Turin	Feb. 19–Mar. 18	16	3	Roumanian refugees.
Japan:				
Ehime	Jan.–Feb.			Present.
Hyogo	do			Do.
Kagawa	do			Do.
Kobe	Nov. 28–Dec. 10	4	1	
Do	Jan. 1–Mar. 25	85	18	
Kochi	Jan.–Feb.			Do.
Osaka	Jan. 22–Mar. 25	314	64	
Java:				
East Java				Sept. 16–Dec. 31, 1916: Cases, 92; deaths, 2. Jan. 27–Feb. 11, 1917: Cases, 11; deaths, 1.
Surabaya	Nov. 4–10	1		
Mid-Java				Sept. 16–Dec. 29, 1916: Cases, 227; deaths, 24. Jan. 28–Feb. 10, 1917: Cases, 19; deaths, 2.
Samarang	Nov. 4–10	3		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Java—Continued.				
West Java				Sept. 29-Dec. 28, 1916: Cases, 408; deaths, 63. Feb. 9-22, 1917: Cases, 19; deaths, 3.
Batavia	Sept. 29-Dec. 28	54	9	
Do	Dec. 29-Feb. 22	25	2	
Mexico:				
Durango	Feb. 17			Present; also in vicinity.
Mexico City	Dec. 10-30	20		
Do	Dec. 31-Mar. 3	72	2	
Monterey	Mar. 12-25			
Nuevo Laredo	Dec. 10-30	1		
Progreso	Apr. 7	1	1	
Vera Cruz	Feb. 18-24			
New Zealand:				
Auckland	Feb. 4-10	4		
Norway:				
Trondhjem	Jan. 1-31	2		
Philippine Islands:				
Manila	Jan. 21-Feb. 17	15		July 30-Dec. 30, 1916: Cases, 10.
Portugal:				
Lisbon	Nov. 19-Dec. 2	6		
Portuguese East Africa:				
Lourenço Marquez	Sept. 1-30		1	
Russia:				
Archangel	Nov. 25-Dec. 29	6	1	
Do	Jan. 1-Feb. 13	44	8	
Moscow	Oct. 16-Dec. 31	139	9	
Do	Jan. 27-Feb. 11	87	47	Nov. 13-25, 1916: Cases, 35; deaths 8.
Petrograd	Oct. 8-Dec. 30	180	25	
Do	Dec. 31-Feb. 17	112	68	
Poland			2	Oct. 1-Dec. 2, 1916: Cases, 38.
Warsaw	Oct. 1-Dec. 2	25	4	Mar. 4-20, 1916: Cases, 65; deaths, 7.
Do	Jan. 9-Feb. 12	39		
Riga	Dec. 31-Jan. 27	4	2	
Vladivostock	Jan. 22-Feb. 4	8		
Spain:				
Bilbao	Jan. 1-31		2	
Cadiz	Nov. 1-Dec. 31		3	
Madrid	do		144	Jan. 1-Dec. 31, 1916: Deaths, 405.
Do	Jan. 1-31		35	
Malaga	Sept. 1-Nov. 30		15	
Seville	Nov. 1-30		22	
Do	Jan. 1-Feb. 28		16	
Valencia	Nov. 19-Dec. 23	5	1	
Do	Jan. 14-Mar. 10	7		
Straits Settlements:				
Penang	Oct. 28-Dec. 30	16	3	
Do	Dec. 31-Mar. 3	32	4	
Singapore	Nov. 19-Dec. 30	3	2	
Do	Jan. 7-Feb. 17	2	1	
Sweden:				
Gothenburg	Jan. 28-Feb. 3		1	
Switzerland:				
Basel	Nov. 5-11	1		
Do	Dec. 31-Mar. 10	28		
Tunisia:				
Tunis	Nov. 25-Dec. 15	51	27	
Do	Dec. 30-Mar. 30	71	45	
Turkey in Asia:				
Trebizond	Nov. 11-Dec. 30	1	1	
Do	Dec. 31-Feb. 10	5	14	
Union of South Africa:				
Johannesburg	Sept. 10-Dec. 30	45		
Do	Dec. 31-Jan. 27	6		
Venezuela:				
Maracaibo	Mar. 3-Apr. 14		19	
On vessel:				
S. S. Nippon Maru	Jan. 22	2		Landed at Yokohama quarantine.
Do	Jan. 24-Feb. 3	9	3	En route to Honolulu. Vessel from oriental ports.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers	Feb. 1-28	1	1	
Argentina:				
Rosario	Nov. 1-30	.....	1	
Austria-Hungary:				
Austria—				
Prague	Jan. 28-Mar. 10	5	.....	
Vienna	Nov. 5-Dec. 30	21	2	
Do	Dec. 31-Mar. 24	38	1	
Hungary—				
Budapest	Nov. 5-Dec. 30	3	1	
Do	Jan. 14-Mar. 24	94	7	
Belgium:				
Ghent	Oct. 29-Nov. 4	.....	1	
Liege	do	.....	1	
Do	Jan. 28-Feb. 3	.....	1	
Canada:				
Ontario—				
Ottawa	Apr. 9-15	.....	1	
China:				
Antung	Nov. 27-Dec. 10	6	.....	
Do	Jan. 15-21	2	.....	
Hankow	Nov. 12-18	1	.....	
Tientsin	Oct. 29-Nov. 4	1	.....	
Tsingtao	Dec. 28-Mar. 29	7	.....	
Cuba:				
Santiago	Dec. 7-13	1	1	
Egypt:				
Alexandria	Nov. 12-Dec. 31	28	12	Nov. 19-Dec. 23, 1916: 5 cases
Do	Jan. 1-Mar. 18	564	122	
Cairo	June 11-July 1	275	142	
Do	July 2-Oct. 28	285	149	
Port Said	June 11-17	20	9	
Do	July 2-Oct. 14	10	8	
Germany:				
Berlin	Oct. 15-Dec. 23	.....	7	
Bremen	Oct. 22-Dec. 30	1	3	
Do	Dec. 31-Jan. 27	1	3	
Frankfort-on-Main	Nov. 12-18	.....	1	
Königsberg	Nov. 12-Dec. 23	5	5	
Do	Dec. 31-Jan. 20	5	2	
Marienwerder district	Dec. 3-9	1	.....	Prison camp.
Neidenburg	Oct. 29-Nov. 18	7	.....	
Nuremberg	Oct. 29-Nov. 11	3	.....	
Stettin	Jan. 21-27	.....	1	
Great Britain:				
Belfast	Mar. 11-31	20	1	
Cork	Jan. 7-Feb. 3	1	.....	
Glasgow	Dec. 3-30	4	.....	
Do	Jan. 7-13	.....	1	
Greece:				
Saloniki	Nov. 7-Dec. 25	.....	36	
Do	Dec. 26-Mar. 10	.....	28	
Italy:				
Bari, Province—				
Corato	Mar. 5-11	5	.....	
Java:				
East Java	.....	.....	.....	Sept. 16-Dec. 16, 1916: Cases, 10. Feb. 4-10, 1917: Cases, 6; deaths, 1.
Mid-Java	.....	.....	.....	Sept. 16-Dec. 29, 1916: Cases, 87; deaths, 7. Jan. 25-Feb. 10, 1917: Cases, 9; deaths, 1.
Samarang	Nov. 4-Dec. 1	10	.....	
West Java	.....	.....	.....	Sept. 29-Dec. 28, 1916: Cases, 185; deaths, 13. Dec. 29, 1916-Feb. 22, 1917: Cases, 50; deaths, 2.
Batavia	Sept. 29-Dec. 28	139	12	
Do	Dec. 29-Feb. 22	48	1	
Mexico:				
Aguascalientes	Dec. 22	.....	.....	Epidemic.
Ciudad Juarez	.....	.....	.....	July, 1916-Feb. 5, 1917: Cases, 100 (estimated).
Durango	Dec. 12	.....	.....	Present.
Do	Jan.-Feb.	.....	.....	Present. Estimated deaths daily, about 25. Present throughout year 1916.
Mexico City	Dec. 3-30	835	.....	
Do	Dec. 31-Mar. 3	1,028	.....	
Monterey	Apr. 2-8	.....	1	
Nuevo Laredo	Dec. 10-16	4	.....	July 1-Dec. 16, 1916: Cases, 28.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 30, 1916, to May 4, 1917—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Netherlands:				
Amsterdam	Feb. 25–Mar. 3	2		
Rotterdam	Nov. 26–Dec. 30	8		
Do	Feb. 4–10	1		
Russia:				
Archangel	Nov. 25–Dec. 29	29	9	
Do	Jan. 1–Feb. 10	32	15	
Moscow	Oct. 16–Dec. 31	127	17	
Do	Jan. 22–Feb. 11	57	14	
Petrograd	Oct. 8–Dec. 30	155	44	
Do	Dec. 31–Feb. 17	26	3	
Poland				Oct. 1–Dec. 2, 1916: Cases, 1,538; deaths, 119. In invaded regions.
Lodz	Oct. 1–Dec. 2	201	20	
Warsaw	do	611	36	Mar. 4–May 20, 1916: Cases, 830; deaths, 80.
Do	Jan. 9–Feb. 12	497	27	
Vladivostok	Jan. 22–Feb. 4	2		
Spain:				
Madrid	Nov. 1–Dec. 31		3	Jan. 1–Dec. 31, 1916: Deaths, 35.
Do	Jan. 1–Feb. 28		3	
Straits Settlements:				
Penang	Feb. 25–Mar. 3	1		
Sweden:				
Stockholm	Nov. 28–Dec. 4	1		
Do	Dec. 31–Jan. 6	3		
Switzerland:				
Basel	Feb. 18–24	1		
Zurich	Dec. 3–9	1		
Do	Jan. 1–Mar. 17	4		
Tunisia:				
Tunis	Dec. 16–22	1		
Turkey in Asia				Feb. 7, 1917: 54 cases reported in Army of the Orient.
Haifa	Oct. 16–22	1		
Trebizond	Dec. 17–30	3	3	
Do	Dec. 31–Feb. 3		5	

YELLOW FEVER.

Brazil:				
Espirito, Santo, State	Jan. 27–Feb. 26	18	4	
Ecuador:				
Babahoyo	Nov. 1–30	1	1	
Chobo	do	1		
Duran	Oct. 1–31	1		
Guayaquil	Sept. 1–Dec. 31	46	24	
Do	Jan. 1–30	17	7	
Milagro	Sept. 1–31	1		
	Oct. 1–31	2	1	
Do	Jan. 1–31	1		
Gold coast				In 1915: Cases, 2; deaths, 2. European and native.